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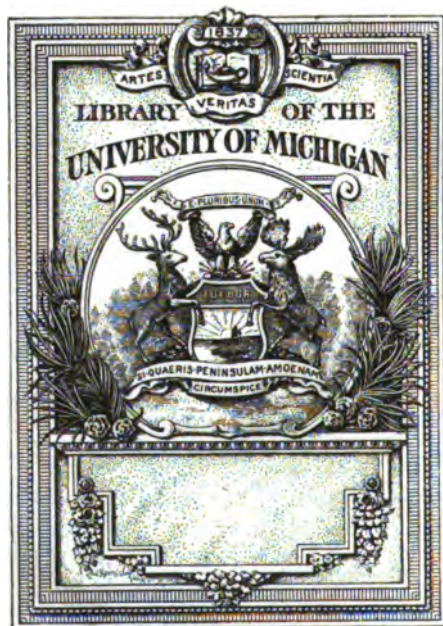
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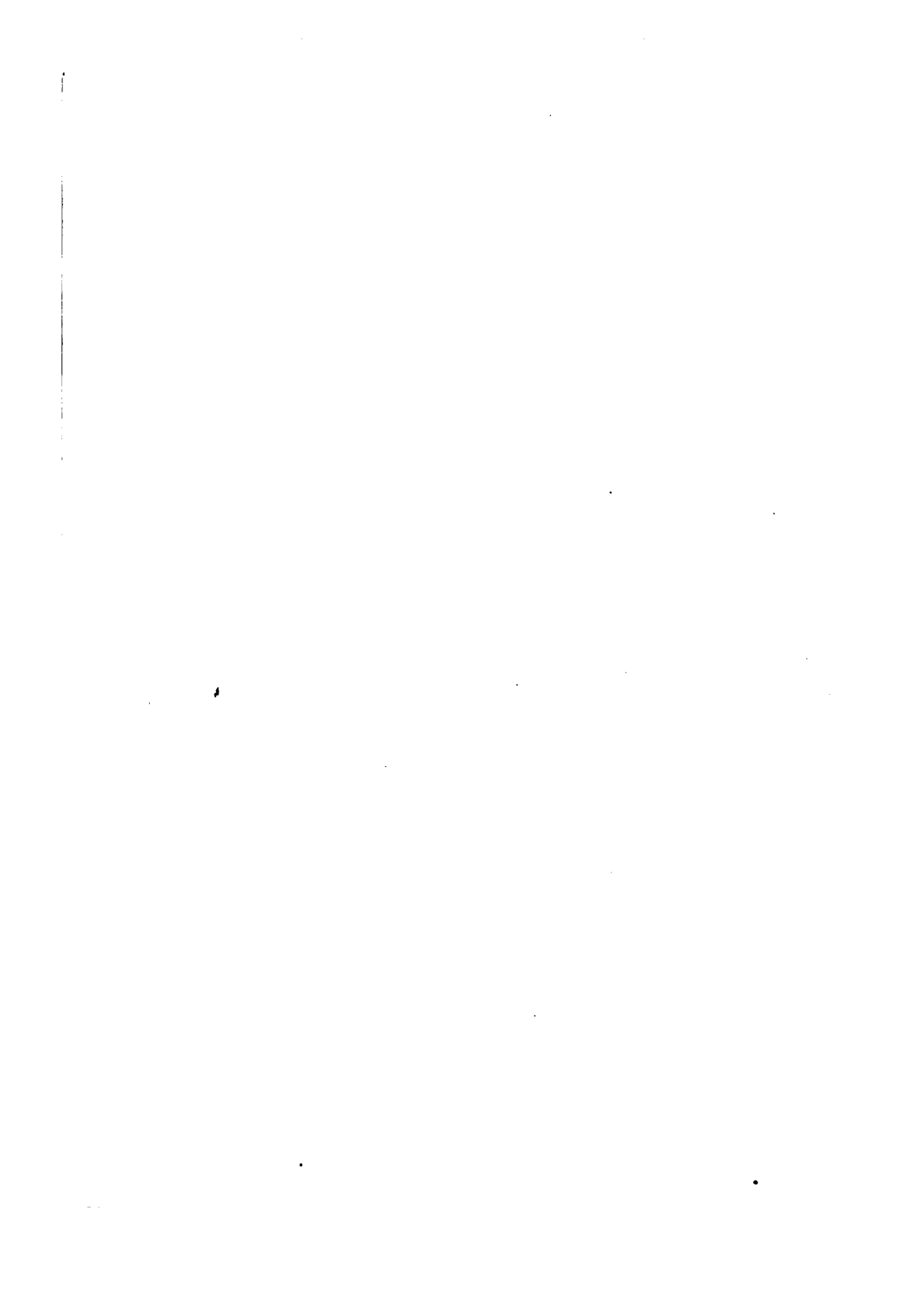
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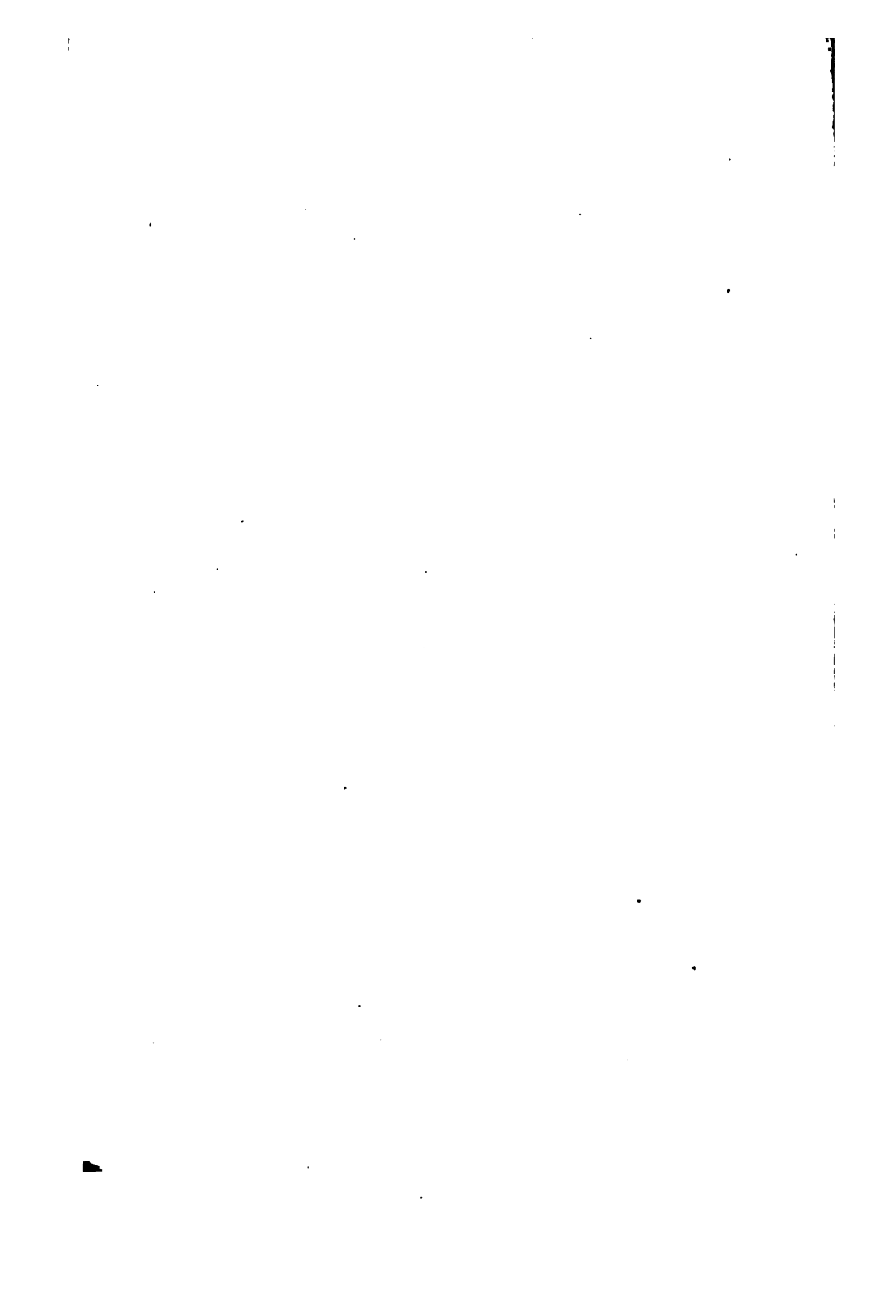
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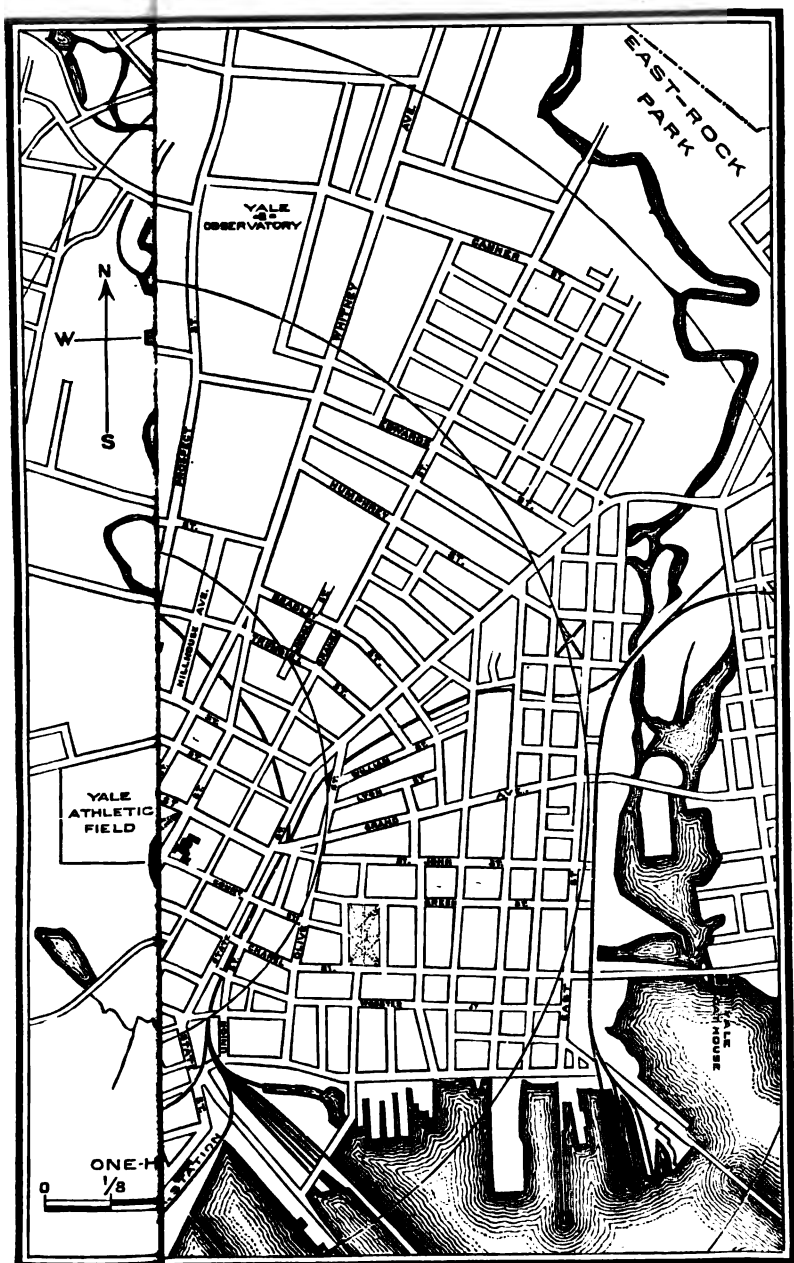


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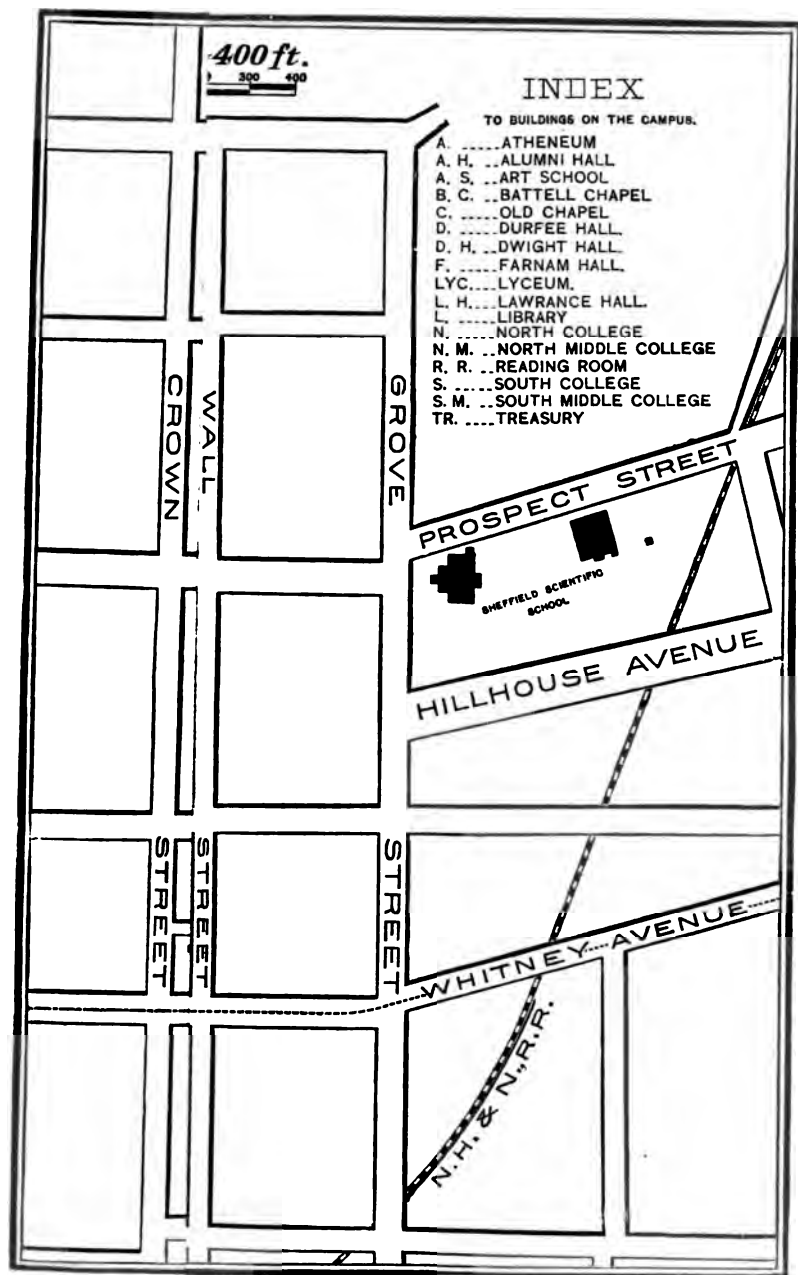


1888-89





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CLXXXIXth YEAR

1888-89



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ABBREVIATIONS

A., Absent on leave; C., Old Chapel; D., Durfee Hall; E., East Divinity Hall; F., Farnam Hall; L., Lawrance Hall; LYC., Lyceum; N., North College; N. M., North Middle College; N. S. H., North Sheffield Hall; P., Peabody Museum; S., South College; S. H., Sheffield Hall; S. M., South Middle College; TR., Treasury Building; W., West Divinity Hall.

Upon the College Square, the rooms numbered from 1 to 32 are in South College; from 33 to 64 in South Middle College; from 65 to 96 in North Middle College; from 97 to 128 in North College; from 129 to 177 in Farnam Hall; from 178 to 185 in the Lyceum; from 186 to 200 in the Old Chapel; from 201 to 240 in Durfee Hall; from 241 to 282 in Lawrance Hall.

The rooms in East Divinity Hall are numbered from 1 to 54; in West Divinity Hall from 55 to 124.

The rooms in Sheffield Hall are numbered from 1 to 21; in North Sheffield Hall from 26 to 58.

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1888

20 Sept.	Thursday	FIRST COLLEGE TERM begins.
27 Sept.	Thursday	Fall Term, Law School, begins.
1 Oct.	Monday	School of the Fine Arts, term begins.
4 Oct.	Thursday	First Term, Medical School, begins.
20 Dec.	Thursday	FIRST TERM ends.

Winter Vacation of two and a half weeks.

1889

8 Jan.	Tuesday	SECOND COLLEGE TERM begins.
10 Jan.	Thursday	Second Term, Medical School, begins.
10 Jan.	Thursday	Winter Term, Law School, begins.
11 April	Thursday	Spring Term, Law School, begins.
11 April	Thursday	Junior Exhibition.
17 April	Wednesday	SPRING RECESS begins.
24 April	Wednesday	SPRING RECESS ends.
6 May	Monday	Berkeley Scholarship Examination.
6 May	Monday	Bristed Scholarship Examination.
15 May	Wednesday	Anniversary of the Divinity School.
20 May	Monday	Woolsey Scholarship Examination begins.
20 May	Monday	Winthrop Prize Examination.
1 June	Saturday	School of the Fine Arts, term ends.
21 June	Friday	Presentation for Academical Degrees.
22 June	Saturday	DeForest Prize Speaking.
23 June	Sunday	Baccalaureate Sermon.
24 June	Monday	Anniversary of the Sheffield Scientific School.
25 June	Tuesday	Anniversary of the Society of Alumni.
25 June	Tuesday	Anniversary of the Law School.
25 June	Tuesday	Anniversary of the Medical School.
26 June	Wednesday	COMMENCEMENT.
27 June	Thursday	} Examinations for admission.
28 June	Friday	
29 June	Saturday	

Summer Vacation of twelve weeks.

17, 18 Sept.	Tuesd., Wedn.	Examinations for admission.
19 Sept.	Thursday	FIRST COLLEGE TERM begins.
26 Sept.	Thursday	Fall Term, Law School, begins.
1 Oct.	Tuesday	School of the Fine Arts, term begins.
3 Oct.	Thursday	First Term, Medical School, begins.
19 Dec.	Thursday	FIRST TERM ends.

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Assistant Librarian of the Law School 419 Temple st.
- FELIX KLEEBERG, Ph.B.
Assistant in Analytical Chemistry (S. H.) 14 Orange st.
- PERCY F. SMITH, Ph.B.
Instructor in Mathematics (46 N. S. H.) 13 Home pl.

GOVERNMENT OF THE UNIVERSITY

The legal designation of the Corporation is "THE PRESIDENT AND FELLOWS OF YALE COLLEGE IN NEW HAVEN;" the powers of this body have been granted and confirmed in the following order.

THE COLLEGIATE SCHOOL OF CONNECTICUT, subsequently named YALE COLLEGE, and now commonly called YALE UNIVERSITY, was founded in the summer of the year 1701 by the combined action of a few of the ministers in Connecticut, who obtained in October of the same year a Charter from the Colony Legislature, which runs as follows:—

AN ACT FOR LIBERTY TO ERECT A COLLEGIATE SCHOOL.

WHEREAS several well disposed, and Publick spirited Persons of their sincere Regard to & Zeal for upholding & Propagating of the Christian Protestant Religion by a succession of Learned & Orthodox men have expressed by Petition their earnest desires that full Liberty and Priveledge be granted unto certain Undertakers for the founding, suitably endowing & ordering a Collegiate School within his Majesty's Colony of Connecticut wherein Youth may be instructed in the Arts & Sciences who thorough the blessing of Almighty God may be fitted for Publick employment both in Church & Civil State. To the intent therefore that all due encouragement be Given to such Pious Resolutions and that so necessary & Religious an undertakeing may be sett forward, supported & well managed:—

BE IT ENACTED by the Govern^r & Company of the s^d Colony of Connecticut, in General Court now Assembled, And it is enacted & ordained by the Authority of the same that there be & hereby is full Liberty, Right and Priveledge Granted unto the Reverend M^r. James Noyes of Stonnington, M^r. Israel Chauncey of Stratford, M^r. Thomas Buckingham of Saybrook, M^r. Abraham Pierson of Kennelworth, M^r. Samuel Mather of Windsor, M^r. Samuel Andrew of Millford, M^r. Timothy Woodbridge of Hartford, M^r. James Pierpont of New Haven, M^r. Noadiah Russel of Middletown, M^r. Joseph Webb of Fairfield, being Rev^d Ministers of the Gospel & inhabitants within y^e s^d Colony,

proposed to stand as Trustees, Partners or Undertakers for the s^d School, to them and their successors, To ERECT, form, direct, order, establish, improve and att all times in all suitable wayes for the future to encourage the s^d School in such convenient place or Places, & in such form & manner & under such order & Rules as to them shall seem meet & most conducive to the afores^d end thereof, so as such Rules or Orders be not Repugnant to the Laws of the Civil Governm^t, as also to imploy the moneys or any other estate which shall be Granted by this Court or otherwise Contributed to that use according to their discretion for the benefit of the s^d Collegiate School from time to time & att all times henceforward.

And be it further ENACTED by the Authority afores^d that the before named Trustees, Partners or Undertakers together with such others as they shall associate to themselves (not exceeding the number of Eleven, or att any time being less than Seven, Provided also that Persons nominated or associated from time to time to fill up s^d number be ministers of the gospel inhabiting within this Colony & above the Age of forty years) or the major Part of them, the s^d Mr. James Noyes, [etc.] undertakers, & of such Persons so chosen & associated as aboves^d att any time hereafter, HAVE and shall have henceforward the oversight, full & compleat Right, Liberty, power & Priveledge to furnish, direct, manage, order, improve & encourage from time to time & in all times hereafter the s^d Collegiate School so Erected & formed by them in such ways, orders & manner & by such Persons, Rector or Master and officers appointed by them, as shall according to their best discretion be most conducive to attaine the afores^d mentioned end thereof.

It is also further Enacted by the Authority afores^d that the s^d Undertakers & Partners & their successors be & hereby are further impowered to have, accept, acquire, purchase or otherwise lawfully enter upon Any Lands, Tenements & Hereditam^{ts} to the use of the s^d School, not exceeding the value of five hundred Pounds p^r Anⁿi, & any Goods, Chattels, Sum or Sums of money whatsoever as have heretofore already been Granted, bestowed, bequeathed or given, or as from time to time shall be freely given, bequeathed, devised or settled by any Person or Persons whatsoever upon & to & for the use of y^e s^d School towards the founding, erecting or endowing the same, & to sue for, Recover & receiv all such Gifts, Legacies, bequests, annuities, Rents, issues & profits arising therefrom & to imploy the same accordingly, & out of y^e estate, Revenues, Rents, profits, incoms accruing & belonging to s^d School to support & pay as the s^d Undertakers shall agree & see cause, the s^d Rector or Master, Tutors, Ushers or other officers their Respective annual Salaries or Allowances. As also for the encouragem^t of the Students to grant degrees or Licences as they or those deputed by them shall see cause to order & appoint.

Under this Charter the Collegiate School was begun at Saybrook, in November, 1701, where it continued until its removal to New Haven, in October, 1716. In September, 1718, the name of YALE COLLEGE was given by the Trustees to the School, in honor of the benefactions of ELIHU YALE, of London, lately Governor of the East India Company's settlement at Madras.

In 1723 an "ACT IN EXPLANATION OF AND ADDITION TO THE ACT FOR ERECTING A COLLEGIATE SCHOOL" was passed by the General Assembly, with the following provisions :—

WHEREAS Pursuant to the Powers and Privileges granted to Certain Trustees for Erecting a Collegiate School in this Colony Entitled an Act for a Collegiate School, the Said Trustees have Erected the Said School in the Town of New-Haven which School is now known by the Name of Yale Colledge; And Whereas it appears to this Assembly that an Explanation and Enlargement of the powers and privileges granted by Said Act is Necessary for the Carrying on the Affairs of the Said Colledge, for want of which it has Laboured under great difficulties very much to the prevention of that Order and good Education which is to be desired there :

Bee it therefore Enacted by the Governour, Council and Representatives in Generall Court assembled and by the Authority of the Same that the Said Act which provides that the Number of the Said Trustees be not under Seven nor above Eleven is not to be Understood or Taken so as to be restrictive of the power of the Said Trustees Never to Choose any person to be a Trustee, when there is of Such persons as have been Chosen and Acted as Trustees Eleven persons Living in the Colony or Elsewhere, but that in Case any person so Chosen be by Providence Incapacitated from attending that Service or shall himself decline the Same thro' the Necessity of his own Affairs or for any other such Reason as he shall Judge requisite, the Trustees in any of their Meetings Lawfully Called may be Understood to have and it is hereby Enacted and declared that they shall be Taken to have full power by the Majority of Such Meeting to proceed to the Choice of Another Trustee in the Room of any such person. And it is hereby further declared and Enacted to be the True Intent and Meaning of the Act afores^d that the said Trustees shall be Impowered and they are hereby declared to have power to Meet Together for Considering, Advising about and Resolving upon all Matters belonging to the Trust of the Said Colledge committed unto them as afores^d and to Agree and Conclude, Order and determine Concerning them by the Majority of the

Said Meeting, and by the same Majority to Choose and Appoint a Clerk who shall, in a fair book prepared for that End, Register and Carefully preserve the Acts of all such Meetings.

And WHEREAS it has been doubted what Number of the Said Trustees may be Lookt upon as a Sufficient or full Meeting, Inasmuch as there is not in the afores^d Act any Express mention made of any Meeting of the said Trustees ; It is therefore to prevent all Scruple of that kind for the future hereby provided and declared that due Notice being given to the Trustees by Consent of any three of them of a Meeting of the Trustees desired at any Time or place, any Seven or more of the Trustees present at such Time and place shall be Esteemed a full Meeting. And it is hereby declared and Enacted that in all such Meetings, so Called, or Otherwise as the said Trustees in any such Meeting shall agree, all affairs under the Care of the said Trustees shall be determined by the Majority of such Meeting.

And WHEREAS it has been found Inconvenient that in the Election of Persons to be Trustees, the Trustees Election by the afores^d Act should be Limited and restrained so as that the Person who shall be Chosen must Necessarily be fourty Years of age ; It is hereby declared and Enacted that for the future the said Trustees in any Election of a person into that Trust shall not be Esteemed or held Obligated by said Act to Choose such a person as shall be above forty Years of Age, but may Choose such a person otherwise Qualifyed According to said Act, Provided he is thirty Years of Age. And it is further hereby Allowed, Enacted, Granted and Provided that whosoever shall be Chosen and made a Rector of the said Colledge shall by Virtue thereof become a Trustee of the same and be so Esteemed and Taken during his Continuance in the said Rectorship.

In 1745 a thoroughly revised Charter was granted by the Assembly, the permanent provisions of which are as follows :—

An ACT for the more full and complete Establishment of YALE COLLEGE in NEW HAVEN, and for enlarging the powers and Privileges thereof.

WHEREAS upon the Petition of several well disposed and public-spirited Persons expressing their desire that full Liberty and Privilege might be granted unto Certain Undertakers for the founding, suitably endowing and ordering a *Collegiate School*, within this Colony, wherein Youth might be instructed in the Arts and Sciences, the Governor and Company of the said Colony in General Court assembled at *New Haven*, on the Ninth Day of October, in the Year of our Lord

1701, Granted unto the Rev'd Messrs. *James Noyes* [etc.], who were proposed to stand as Trustees, Partners or Undertakers for the Society, and to their Successors, full Liberty, Right and Privilege to erect, form, direct, order, establish, improve, and at all Times in all suitable Ways to encourage the said School in some convenient Place in this Colony and granted sundry Powers and Privileges for the attaining the End aforesaid ;

And Whereas the said Trustees, Partners or Undertakers in pursuance of the aforesaid Grant, Liberty and License, founded a *Collegiate School* at *New Haven*, known by the Name of YALE COLLEGE, which has received the favorable Benefactions of many liberal and piously disposed Persons, and under the Blessing of Almighty God has trained up many worthy Persons for the Service of God in the State as well as in the Church ;

And Whereas the General Court of this Colony assembled at *New Haven*, the Tenth Day of October, in the Year of our Lord 1723, did explain and enlarge the aforesaid Powers and Privileges granted to the aforesaid Partners, Trustees or Undertakers and their Successors, for the Purpose aforesaid ; as by the respective Acts, reference thereto being had, more fully and at large may appear ;

And Whereas the Rev'd Messrs. *Thomas Clap, Samuel Whitman, Jared Eliot, Ebenezer Williams, Jonathan Marsh, Samuel Cooke, Samuel Whittlesey, Joseph Noyes, Anthony Stoddard, Benjamin Lord, and Daniel Wadsworth*, the present Trustees, Partners and Undertakers of the said School, and Successors of those beforementioned, have petitioned, that the said School, with all the Rights, Powers, Privileges and Interests thereof, may be confirmed, and that such other additional Powers and Privileges may be granted as shall be necessary for the Ordering and Managing the said School in the most advantageous and beneficial Manner for the promoting all good Literature in the present and succeeding Generations :

Therefore,

THE GOVERNOR and COMPANY of his Majesty's said English Colony of *Connecticut* in General Court assembled, this Ninth Day of *May*, in the Year of our Lord 1745, enact, ordain, and declare, and by these Presents it is enacted, ordained and declared—

That the said *Thomas Clap* [etc.], shall be an *Incorporate Society* or *Body Corporate and Politic*, and shall hereafter be called and known by the name of THE PRESIDENT AND FELLOWS OF YALE COLLEGE IN NEW HAVEN, and that by the same Name they and their Successors shall and may have perpetual Succession, and shall and may be Persons in the Law capable to plead and be impleaded, defend and be defended, and answer and be answered unto ; and also to have, take, possess, acquire, purchase or otherwise receive Lands, Tenements, Hereditaments, Goods, Chattels, or other Estates, and the same Lands, Tenements,

Hereditaments, Goods, Chattels or other Estates to grant, demise, lease, use, manage or improve for the Good and Benefit of the said *College*, according to the Tenor of the Donation, and their Discretion.

That all Gifts, Grants, Bequests, and Donations of Lands, Tenements, or Hereditaments, of Goods and Chattels heretofore made to or for the Use, Benefit and Advantage of the *Collegiate School* aforesaid, whether the same be expressed to be made to the President or Rector, and to the rest of the Incorporate Society of *Yale College*, or to the Trustees or Undertakers of the *Collegiate School* in *New Haven*, or to the Trustees by any other Name, Style or Title whatsoever, whereby it may be clearly known and understood that the true Intent and Design of such Gifts, Grants, Bequests and Donations, was to or for the Use, Benefit and Advantage of the Collegiate School aforesaid, and to be under the Care and Disposal of the Governors thereof, shall be confirmed, and the same hereby are confirmed, and shall be and remain to, and be vested in the President and Fellows of the *College* aforesaid, and their Successors, as to the true and lawful Successors of the original Grantees.

That the said PRESIDENT AND FELLOWS and their Successors shall and may hereafter have a common Seal, to serve and use for all Causes, Matters and Affairs of them and their Successors, and the same Seal to alter, break and make new as they shall think fit.

That the said THOMAS CLAP shall be, and he is hereby established the present PRESIDENT, and the said *Samuel Whitman*, [etc.] shall be, and they are hereby established the present FELLOWS of the said College, and that they and their Successors shall continue in their respective Places during Life, or until they or either of them shall resign, or be removed, or displaced, as in this Act is hereafter expressed.

That there shall be a General Meeting of the *President and Fellows* of said *College*, in the College Library on the second Wednesday of September annually, or at any other Time and Place which they shall see Cause to appoint, to consult, advise and act in and about the Affairs and Business of the said College; and that on any special Emergency, the President and two of the Fellows, or any four of the Fellows, may appoint a Meeting of the said College, provided they give Notice thereof to the Rest by Letters sent and Left with them, or at the Places of their respective Abode, five Days before such Meeting; and that the President and six Fellows, or in Case of the Death, Absence, or Incapacity of the President, seven Fellows, convened as aforesaid (in which Case the eldest Fellow shall preside), shall be deemed a Meeting of the President and Fellows of said College, and that in all the said Meetings, the Major Vote of the Members present shall be deemed the Act of the Whole, and where an Equivote happens, the President shall have a casting Vote.

That the President and Fellows of the said College and their Successors, in any of their Meetings assembled as aforesaid, shall and may

from Time to Time, as Occasion shall require, elect and appoint a President or Fellow in the Room and Place of any President or Fellow who shall die, resign, or be removed from his Office, Place or Trust (whom the said Governor and Company hereby declare, for any Misdemeanor, Unfaithfulness, Default or Incapacity, shall be removable by the President and Fellows of the said College; Six of them, at least, concurring in such Act); and shall have Power to appoint a Scribe or Register, a Treasurer, Tutors, Professors, Steward and all such other Officers and Servants, usually appointed in Colleges or Universities, as they shall find necessary and think fit to appoint for the promoting good Literature, and the well ordering and managing the Affairs of said College; and them or any of them, at their Discretion, to remove; and to prescribe and administer such Forms of Oaths (not being contrary to the Laws of England or of this Colony) as they shall think proper, to be administered to all the Officers and Instructors of the said College, or to such and so many of them as they shall think proper, for the faithful Execution of their respective Places, Offices and Trusts.

That the President and Fellows shall have the Government, Care and Management of the said College and all the Matters and Affairs thereunto belonging, and shall have Power from Time to Time, as Occasion shall require, to make, ordain and establish all such wholesome and reasonable Laws, Rules and Ordinances, not repugnant to the Laws of England, nor the Laws of this Colony, as they shall think fit and proper for the Instruction and Education of the Students, and Ordering, Governing, Ruling and Managing the said College, and all Matters, Affairs, and Things thereunto belonging, and the same to Repeal and alter as they shall think fit.

That the President of said College, with the Consent of the Fellows, shall have Power to give and confer all such Honors, Degrees or Licenses as are usually given in Colleges or Universities, upon such as they shall think worthy thereof.

In 1792 a grant of money from the State of Connecticut was received, upon the condition that certain State officials should become members of the board of Fellows, as below expressed :—

In case this grant shall be accepted, in manner as hereinafter provided, the Governor, Lieutenant Governor, and six senior assistants in the Council* of this State, for the time being, shall ever hereafter, by virtue of their said offices, be Trustees or Fellows of said college; and shall together with the present President and Fellows of said College, and their successors, constitute one corporation, by the name and style

* Changed in 1819 to the six senior senators.

mentioned in the charter of said College; and shall have and enjoy the same powers, privileges, and authority, in as full and ample a manner, as though they had been expressly named and included in said charter; And that in case of vacancy, by the death, or resignation, or in any other way, of any of the present Fellows of said College, and their successors, every such vacancy shall forever hereafter be supplied by them, and their successors, by election, in the same manner as though this act had never passed.

In the new Constitution of the State, adopted in 1818, the privileges conferred by the Charter were reaffirmed, as follows:—

ARTICLE VIII, SECT. I.

The charter of Yale College, as modified by agreement with the Corporation thereof, in pursuance of an Act of the General Assembly, passed in May, 1792, is hereby confirmed.

In 1872, at the request of the Corporation, an Act was passed by the General Assembly, providing (as follows) for the substitution of graduates in the place of the six senators among the Fellows:—

SECTION 1.—All graduates of the first degree, of five or more years' standing, in any of the departments of Yale College, and all persons who have been admitted to any degree higher than the first in Yale College, whether honorary or in course, may, on the day next preceding the public commencement day of said College, in the year of our Lord 1872, cast their votes, under such regulations as the President and Fellows may prescribe, for six persons to be chosen from among such graduates; and the six persons who shall be found to be elected by a plurality of the votes cast, shall be the Fellows of Yale College in the stead of the six senior senators of the State, and shall have all the rights, duties, and privileges as Fellows which are now by law conferred upon said senators. In case of an equality of votes between two or more candidates, the person who shall hold the said office of Fellow shall be designated by lot from among the persons receiving such equality of votes.

SECTION 2.—The Fellows thus elected shall enroll themselves by lot in six classes, one holding the office for six years, another for five years, another for four years, another for three years, another for two years, and another for one year, eligible for re-election; and every year as a vacancy occurs, all graduates of the first degree, of five or more years' standing

in any of the departments of Yale College, and all persons who have been admitted to any degree higher than the first in Yale College, whether honorary or in course, may, upon the day next preceding commencement day, in the manner heretofore prescribed, elect by a plurality of votes a person to fill the vacancy, and hold the office of Fellow for a period of six years, eligible for re-election; and so whenever a vacancy shall occur from death, resignation, or any other cause, such graduates may elect a person at the next commencement to fill the office of Fellow for the remainder of the term in which a vacancy has occurred. The official year of such Fellows shall end with the day next preceding each commencement day.

In January, 1887, an Act passed the General Assembly of the State, authorizing the use of the title "Yale University" by the President and Fellows of Yale College, and providing that gifts to, contracts with, conveyances to or by, and other acts affecting said Corporation by either of the names specified shall be valid.

DEPARTMENTS OF INSTRUCTION

The courses of study offered in the University are comprehended in four Departments, under the control of the Corporation, each Department being also under the administration of a distinct Faculty of instruction. The Departments are as follows :—

THE DEPARTMENT OF PHILOSOPHY AND THE ARTS,
THE DEPARTMENT OF THEOLOGY,
THE DEPARTMENT OF MEDICINE,
THE DEPARTMENT OF LAW.

Under the first-named Department are included two separately organized sections in which instruction for undergraduates is provided, viz :—

THE ACADEMICAL DEPARTMENT, and
THE SHEFFIELD SCIENTIFIC SCHOOL ;

also, THE SCHOOL OF THE FINE ARTS, with a special organization ; and The Courses for GRADUATE INSTRUCTION, under the combined Faculty of the Department.

It is to be understood that the courses of instruction above described are open to persons of the male sex only, except when both sexes are specifically included.

THE LIBRARY, the PEABODY MUSEUM OF NATURAL HISTORY, and the OBSERVATORY are severally organized independently of the special Departments, and are designed to contribute, in their appropriate spheres, to the instruction and advancement of the whole institution.

ACADEMICAL DEPARTMENT

(YALE COLLEGE)

FACULTY

REV. TIMOTHY DWIGHT, D.D., LL.D., PRESIDENT
REV. NOAH PORTER, D.D., LL.D., *Professor of Moral Philosophy and Metaphysics*
ELIAS LOOMIS, LL.D., *Professor of Natural Philosophy and Astronomy*
JAMES D. DANA, PH.D., LL.D., *Professor of Geology and Mineralogy*
EDWARD J. PHELPS, LL.D., *Professor of Law*
HUBERT A. NEWTON, LL.D., *Professor of Mathematics*
ARTHUR M. WHEELER, M.A., *Professor of History*
J. WILLARD GIBBS, PH.D., *Professor of Mathematical Physics*
ARTHUR W. WRIGHT, PH.D., *Professor of Experimental Physics*
EUGENE L. RICHARDS, M.A., *Assistant Professor of Mathematics*
WILLIAM I. KNAPP, PH.D., *Professor of Modern Languages*
FRANKLIN B. DEXTER, M.A., *Registrar*
TRACY PECK, M.A., *Professor of Latin*
REV. CORNELIUS L. KITCHEL, M.A., *Instructor in Greek*
WILLIAM G. SUMNER, LL.D., *Professor of Political and Social Science*
REV. GEORGE T. LADD, D.D., *Professor of Mental and Moral Philosophy*
HENRY P. WRIGHT, PH.D., *Professor of Latin, and Dean*
HENRY A. BEERS, M.A., *Professor of English Literature*
EDWARD S. DANA, PH.D., *Assistant Professor of Natural Philosophy*
THOMAS D. SEYMOUR, M.A., *Professor of Greek*
FRANK A. GOOCH, PH.D., *Professor of Chemistry*
WILLIAM BEEBE, B.A., *Assistant Professor of Mathematics and Astronomy*
ANDREW W. PHILLIPS, PH.D., *Assistant Professor of Mathematics*
GEORGE B. ADAMS, PH.D., *Professor of American History*
WILLIAM T. STRONG, M.A., *Instructor in German*
HORATIO M. REYNOLDS, B.A., *Assistant Professor of Greek*
FRANK P. GOODRICH, B.A., *Instructor in German*
GEORGE M. DUNCAN, M.A., *Instructor in Mental and Moral Philosophy*
J. ERNEST WHITNEY, B.A., *Instructor in English*
FRANK F. ABBOTT, B.A., *Tutor in Latin*

EDWARD T. McLAUGHLIN, B.A., *Tutor in English*
ELIAKIM H. MOORE, JR., PH.D., *Tutor in Mathematics*
HORACE D. TAFT, B.A., *Tutor in Latin*
W. IRVING HUNT, B.A., *Tutor in Greek*
FRANK G. MOORE, B.A., *Tutor in Latin*

OTHER INSTRUCTORS

WILLIAM D. WHITNEY, PH.D., LL.D., *Professor of Comparative Philology and Sanskrit*
MARK BAILEY, M.A., *Instructor in Elocution*
WILLIAM C. ROBINSON, LL.D., *Professor of Law*
DANIEL C. EATON, M.A., *Professor of Botany*
SIDNEY I. SMITH, M.A., *Professor of Comparative Anatomy*
WILLIAM R. HARPER, PH.D., *Professor of the Semitic Languages*
RUSSELL H. CHITTENDEN, PH.D., *Professor of Physiological Chemistry*
ARTHUR T. HADLEY, M.A., *Professor of Political Science*
EUGÈNE BERGERON, *Instructor in French*
JAY W. SEAVER, M.D., *Instructor in Gymnastics and Practical Hygiene*

From the date of the original Charter, in 1701, a course of instruction leading to the degree of Bachelor of Arts has been continuously offered at the College; at first only three years of undergraduate study were required, but before 1710, a four years' course was provided, which has been since maintained.

Until 1813, when a Medical School was organized, no other course of study for a degree was marked out at Yale College; but with the incorporation of the Medical Institution (as it was originally styled) the older Department began to be designated The Academical Institution (or Department), and has continued to be so designated until at length, with the growth of other Schools about it and the expansion of the whole into Yale University, the original title of Yale College has again come to be applied distinctively to this Department.

TERMS OF ADMISSION

ALL CANDIDATES FOR ADMISSION to the Freshman Class are examined in the following books and subjects ; certificates of standing elsewhere are not accepted in place of this examination :—

1. Latin Grammar.
 2. Caesar—Gallic War, books i-iv.
 3. Cicero—Orations against Catiline and for Archias, and, in addition, either the Marcellus and the 14th Philippic, or the Milo, or the Manilian Law, or the Cato Major.
 4. Vergil—Bucolics, and first six books of the Aeneid, including Prosody.
 5. Ovid—Metamorphoses, translation at sight.
 6. The translation, at sight, into simple and idiomatic English, of passages from prose Latin.
 7. The translation into Latin of connected passages of English prose. [As special importance is given to this part of the examination, it is suggested to teachers that they connect exercises in making Latin, both oral and written, with all the Latin studies of the preparatory course.]
 8. Roman History, to the death of Augustus.
-
9. Greek Grammar.
 10. Xenophon—Anabasis, four books.
 11. Homer—Iliad, three books, with Prosody.
 12. The translation, at sight, into simple and idiomatic English, of a passage from some work of Xenophon.
 13. The translation of English into Greek : Jones's Exercises, White's Lessons, and Keep's Lessons are suggested, as indicating the preparation required.
 14. Greek History.
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15. Higher Arithmetic—including the metric system of weights and measures.
 16. Algebra—so much as is included in Loomis's Treatise, up to the chapter on Logarithms.
 17. Plane Geometry.
-
18. French or German—so far as to translate at sight easy prose, the candidate being at liberty to decide for himself in which of the two languages he shall be examined.

Candidates are allowed to divide the examination, with an interval of not less than one year between the two parts. In such cases, they must present themselves at one of the two regular examinations, that is, either in June or in September, of the first year; and at this preliminary examination each candidate must submit a definite statement from his principal instructor of the subjects which he is authorized to offer. No candidate will be allowed to offer French, German, Geometry, the translation at sight of prose Latin, or of prose Greek, at a preliminary examination; and at the close of such an examination, no certificate of partial admission will be furnished, unless at least six subjects have been satisfactorily passed.

THE REGULAR EXAMINATION FOR ADMISSION to College is held at Alumni Hall, New Haven, on Thursday, Friday, and Saturday after Commencement (June 27, 28, 29, 1889; *attendance is required at the opening of the examination, at 9 A. M. on Thursday*, and the sessions will close Saturday noon. The examination is wholly in writing; a set of papers recently given will be sent by the Registrar on application.

In 1889 examinations (beginning on Thursday, June 27, at 9 A. M., and closing Saturday noon) for admission to the Freshman Class (but not to higher classes) will also be held in Exeter, N. H., Andover, Mass., New York City, Chicago, Cincinnati, and San Francisco, at places to be announced in the local newspapers of the day previous. Candidates who propose to be present elsewhere than at New Haven are requested to send their names to the Secretary before June 15. A fee of five dollars (payable at the opening of the sessions) is charged for admission to examinations outside of New Haven. The College is also prepared to hold an examination, at the above named time, in any city or at any school where the number of candidates and the distance from other places of examination may warrant it; applications for this purpose must be sent to the Registrar before May 15.

A second examination is held in New Haven at the

beginning of the College year, on Tuesday and Wednesday (September 17, 18, 1889); candidates for this examination must be present at Alumni Hall at 9 A. M. on Tuesday.

Persons applying for admission to any of the classes in College during the course of the College year (that is, from September to June) must first obtain from the Faculty permission to be examined, and pay to the Treasurer a fee of ten dollars.

In general, examinations for admission to the next Freshman Class can be held only in June and September as specified; if in any case sufficient reason exists for an exception to this rule, a special fee (not exceeding fifty dollars) will be charged.

ADVANCED STANDING—All candidates for advanced standing, *whether from other Colleges or not*, are examined, in addition to the preparatory studies, in those studies already pursued (see pp. 34 ff.) by the class which they wish to enter. In the several languages, for the particular books studied by the class equivalent amounts from other books may be offered. Certificates of standing elsewhere cannot be accepted in place of these examinations, although they may be taken into account as collateral evidence of fitness for admission.

Bachelors of Arts or of Philosophy of any institution may join the Senior Class (without examination and without becoming candidates for the Bachelor's degree), as candidates for the degree of Doctor of Philosophy after three years' study.

No one can be admitted to the Senior Class after the beginning of the second term.

AGE—No one can be admitted to the Freshman Class till he has completed his fifteenth year, nor to an advanced standing without a corresponding increase of age.

TESTIMONIALS—Satisfactory testimonials of good moral character (preferably from the last principal instructor) are in all cases required, before a certificate of admission in full can be granted. Students from other Colleges must present certificates of dismissal in good standing.

BOND—Every person must give to the Treasurer, on being admitted, a bond, executed by his parent or guardian, for five hundred dollars, as security for the payment of charges arising under the laws of the College. A blank form for this purpose will be furnished at the time of admission.

GOVERNMENT AND INSTRUCTION

The Dean has the general supervision under the Faculty of the Senior and Junior Classes; the members of the two lower classes are assigned by divisions for a similar supervision to the care of the several instructors in those Classes. Absence from College exercises will be excused only for extremely urgent reasons. In general, a student cannot be excused for absence at the beginning or near the end of a term.

In order to cover all cases of absence which may seem justifiable to the student, but for which no excuses will be accepted, an allowance is granted to a member of the Senior or Junior Class of absence from eight class-room exercises (recitations, lectures, or rhetorical appointments), and to a member of the Sophomore or Freshman Class from six class-room exercises, during the first term and during each half of the second term, without incurring marks and without affecting his record for scholarship; provided that these absences shall not immediately precede or follow a vacation or recess; provided, also, that no two absences shall be consecutive in any one study, and that such absences shall not excuse the student from preparation upon the omitted lessons when reviewed.

The members of each of the three lower classes are arranged at the beginning of each term in divisions according to scholarship. During the present year, for required work the Senior Class is divided into three divisions, the Junior Class into four, the Sophomore Class and the Freshman Class into six divisions; in the elective courses, the divisions are of convenient size for class-room work.

Greek, Latin, Mathematics, and English, occupy thirteen hours of class-room work per week in Sophomore year and the first term of Freshman year, and twelve hours per week during the second term of Freshman year. Three hours of class-room work per week during Freshman year, and two hours per week during Sophomore year, are given to Modern Languages.

If a student can pass a satisfactory examination in any of the prescribed studies for the work of one year in advance, he may be allowed to choose from the list of Electives (see p. 37) some other course which he is qualified to pursue with advantage, covering the same number of hours.

In the Freshman and Sophomore years all the work is *prescribed*. The kind and amount of study in these two years are believed to be such as are essential for laying the foundation of a liberal education, whatever the department or profession that may be pursued in after-life; and no more than is needed to give the student a proper basis of knowledge and discipline for the study of the *elective* courses which follow, and that knowledge of himself, and of the subjects before him which is needed for a judicious choice. The basis is necessarily a broad one. The only prominent departments not now in this foundation, either in the preparatory or college work, though pursued in the later elective courses, are those of the Natural Sciences and Chemistry. As some knowledge of these departments, of their methods of reasoning, of the use of the words "species" and "genus," and some idea of the system of nature, are essential to the student of almost any branch of philosophy, as well as to those who may take the elective courses in these sciences, it is recommended that the student should include the study of the elements of some departments of the Natural Sciences, and of Chemistry, in his preparation for College.

Of the work of the Junior year three-fifths and of that of the Senior year four-fifths are in elective courses. The whole number of elective studies open to the two classes is at the

present time one hundred and one; and in addition there are several courses of lectures, attendance on which is optional. The Juniors have open to them elective studies in the English language and literature, History, Political Science, and the Natural Sciences, in addition to those in the departments of the Classics, the Modern Languages, and Mathematics; and the Seniors, electives under all these departments, along with others of higher range as particularly explained below.

Many of the courses fall naturally into groups: as that of the Ancient Languages and Linguistics; Psychology, Logic, and Philosophy, with Ethics; Political Science and Law; History; Modern Languages and Literature; Mathematics and Physics; Chemistry and the Natural Sciences; and the student is recommended to select his courses as far as possible according to his needs, in part perhaps according to his expectations as to future work, fixing first upon the chief subject, and selecting others that are subsidiary to it. In several cases, related courses are accessible to the student only as they are taken consecutively.

To promote the rational choice of elective courses, SPECIAL HONORS in the various groups of studies are offered, to be given at the end of the Senior year, in accordance with the scheme on a later page.

THE PROGRAM OF STUDIES for the current year is as follows:

FRESHMAN YEAR:

Greek—Homer's *Iliad* (two books); Homer's *Odyssey* (four books); Xenophon's *Hellenica* (50 pp.); Herodotus (50 pp.); Lysias (80 pp.); Prose Composition. (Students especially proficient in Greek will be assigned to an advanced section.)

Latin—Cicero's *Tusculan Disputations* (book i) and *Selected Letters*; Livy, books xxi and xxii; *Satires of Horace*; Prose Composition; *History of the Roman Republic*.

French or German—Three hours a week throughout the year. Students may at their option either continue the study of the modern language presented for admission to college, or begin the study of German in case they have not previously pursued it. Those who have sufficient

knowledge of either language will be assigned to classes still further advanced.

Mathematics—In *Geometry*: Planes, Polyhedrons, Cones, Cylinders, and Spheres. Projection of figures with exercises on Models. Text-book, Chauvenet's *Geometry*.

Plane Trigonometry: Solution of Triangles, Mensuration and Surveying. Text-book, Richards's *Trigonometry*. *Trigonometric Analysis*. Text-book, Case's *Elementary Treatise*.

Algebra: The Geometrical interpretation of the Theory of Equations, Imaginaries, and the Solution of Higher Equations. Text-book, Phillips & Beebe's *Graphic Algebra*.

SOPHOMORE YEAR:

Greek—The *Antigone* of Sophocles; the *Agamemnon* of Aeschylus; the *Medea* of Euripides; the *Panegyric* of Isocrates; Thucydides (45 pp.); Plato's *Apology* and *Crito*. (The *Frogs* of Aristophanes with a special section.)

Latin—Agricola of Tacitus; Selections from Pliny's *Letters*; Odes and Epodes of Horace; *Trinummus* and *Miles Gloriosus* of Plautus; sight reading from Cicero and Sallust.

Modern Languages—Advanced French, or advanced German, at the option of the student, two hours a week throughout the year. Those who so desire may begin the study of German, in case they have never pursued it.

Mathematics—*Trigonometry*: Spherical Trigonometry. Applications to Navigation and Astronomy. Text-book, Richards's *Trigonometry*.

Analytical Geometry: Plane and Solid, with Applications to Map Projection. Text-book, Loomis's *Analytical Geometry*.

Mechanics—The elementary principles of Kinematics, Kinetics (or Dynamics), and Statics, in reference to solid bodies, with practical applications. Text-book, Dana's *Mechanics*.

English Literature—Shakspeare: 1 *Henry IV.*, *Twelfth Night*, *Julius Caesar*, *Hamlet*, and *Tempest*. Essayists: see *Rhetoric*.

Rhetoric—Selections from leading English essayists from Addison to Ruskin, with rhetorical analysis; connected through the 1st Term with exercises in extempore composition. During the remainder of the year, five essays.

JUNIOR AND SENIOR YEARS:

The *prescribed* courses of Junior year occupy six hours per week, and those of Senior year three hours per week. In addition, each member of the Junior class is required to select nine hours per week, and each member of the Senior class twelve hours per week, from the list of *elective* courses.

PRESCRIBED STUDIES OF JUNIOR YEAR :

Physics—Ganot's *Physics* : during the first term the subjects of Liquids, Gases, Sound, and Light, and part of the subject of Heat, with experimental illustrations in the class-room ; during the second term, Heat continued, followed by Electricity and Magnetism, with weekly experimental lectures on these three subjects.

Astronomy—Loomis's *Treatise on Astronomy*.

Logic—Jevons's *Lessons in Logic* ; Fowler's *Inductive Logic* ; exercises in the criticism of arguments ; lectures.

Psychology—Porter's *Elements of Intellectual Science*, Introduction, First and Second Parts ; Lotze's *Outlines of Psychology* ; lectures.

PRESCRIBED STUDIES OF SENIOR YEAR :

Psychology—Porter's *Elements of Intellectual Science*, Third and Fourth Parts ; Lotze's *Outlines of Psychology* ; lectures.

Ethics—Porter's *Elements of Moral Science*.

Theism, and the Evidences of Christianity—lectures.

RHETORIC AND ELOCUTION :

Rhetoric—English Composition. Four or five themes a year are required from each member of the Senior, Junior, and Sophomore classes ; these themes are read and corrected by the instructors in Rhetoric. For premiums in this department see p. 70.

Elocution—Sophomore Year: Lectures on the Science and Art of Elocution,—logical analysis,—vocal analysis, expression, and culture,—oratorical action. Practice in speaking and recitation by sub-divisions of twelve each. Individual instruction and private drill in preparation for speaking in divisions of eighteen per week before the class and the Professor of Rhetoric for the "Prizes for Declamation."

Junior Year: Three weeks of preparatory training for the speakers at the Junior Exhibition.

Senior Year: Three weeks of preparatory training for the speakers at Commencement.

ELECTIVE COURSES

Juniors select nine hours per week, and Seniors twelve hours per week, from the following list. All the courses are open to members of either class, unless some limitation is specified. The number of hours specified means, in every case, hours per week. When a course is stated as occupying "both terms," it cannot, if chosen, be abandoned during the year.

I. MENTAL AND MORAL SCIENCE

Ex-President PORTER :—

- 1 *Ethics.* [Seniors.] 2 hrs. both terms.
History and criticism of ethical theories from Hobbes to Leslie Stephen, with reading and analyses of the works of representative writers, following Martineau's Types of Ethical Theory ; followed by studies in Philosophy as related to theism, using Martineau's Study of Religion.
- 2 *Philosophy.* [Seniors.] 2 hrs. both terms.
Critical readings and analyses in British Philosophy from Locke to Herbert Spencer.

Professor LADD :—

- 3 *Physiological Psychology.* 2 hrs. both terms.
A study (illustrated by charts, models and histological preparations) of the human nervous mechanism, of the principal relations which exist between changes in this mechanism and the activities of the mind, and a discussion of the conclusions which may be drawn from these relations respecting the nature and laws of the mind. Ladd's Elements of Physiological Psychology.
- 4 *Philosophical Anthropology.* [Seniors.] 2 hrs. both terms.
Man, as body and mind, in his relations to the world, to his fellows, and to God, and in his historical development,—from the modern scientific and philosophical points of view. Lotze's Microcosmus ; discussions and lectures.
- 5 *Metaphysics.* [Seniors.] 2 hrs. both terms.
Kant's Critique of Pure Reason, his Critique of Practical Reason, and his Metaphysic of Ethics, will be read and expounded by lectures. This course is designed for special and advanced students of philosophy.

Mr. DUNCAN :—

- 6 *Logic.* 1 hr. both terms.
This course is in Mill's Inductive Logic and is designed to supplement the study of deductive logic in Junior year.
- 7 *History of Philosophy.* [Seniors.] 2 hrs. both terms.
An elementary study of the development of speculative thought from Descartes to the present time.

II. POLITICAL SCIENCE AND LAW

Professor SUMNER :—

8 *Political Economy.* 2 hrs. both terms.

The elements of Political Economy, and the recent financial history of the United States. This course will be planned as a two years' course, although it may be dropped at the end of the first year. It should be taken by Juniors who intend to give especial attention to this subject, as it is introductory to all the Senior courses in this department. Those who intend to take only one course in Political Economy are recommended to take course 11 in Senior year.

(Courses 9, 10, and 12 are open only to those who have taken one course in Political Economy.)

9 *Political Economy.* [Seniors.] 2 hrs. both terms.

Advanced Political Economy, consecutive with the preceding, taking up again topics of production, exchange, and consumption, which will be studied in greater detail and by more independent methods than in the first year, especially by the study of problems, the examination of cases, and the preparation of theses.

10 *Finance.* [Seniors.] 1 hr. both terms.

A second-year course in money, banking, taxation, and public debts. The exercises will consist of papers on assigned topics. Courses 9 and 10 are the continuation into Senior year of course 8; the time and topics being divided for convenience of choice.

11 *Political Economy.* [Seniors.] 3 hrs. both terms.

A one-year course planned to give a substantial and comprehensive knowledge of the essentials of Political Economy to those whose chief interest lies in other departments of study.

Such divisions will be made as are expedient for class-room work according to the number who may select the courses. Those who take course 8 will be united for a lecture once a week on the topics treated in the text-book.

12 *Social Science.* [Seniors.] 1 hr. both terms.

A very elementary course in the structure of society, and the origin and laws of development of civilization, on the basis of prehistoric science, ethnology, and archaeology. The topics will be illustrated by plates from the whole literature of Anthropology, and by visits to the Museum. The course will be occupied entirely with positive information and scientific method, and will not take up any of the subjects of criticism and speculation popularly connected with "social science." Tylor's Anthropology;

Joly's *Man Before Metals*. Those who also take French may read Mortillet's *Le Préhistorique*, and Quatrefages's *Histoire Générale des Races Humaines*, by arrangement with the department of Modern Languages (see course 25). A section of the class, who have sufficient knowledge of German, read Lippert's *Kulturgeschichte*.

Professor HADLEY :—

13 *Industrial History of the United States since 1850.*

[Seniors.] 2 hrs. 1st term.

Open only to those who have studied Political Economy and are ready to do original work in collecting and arranging statistics.

14 *Modern Economic Theories.* [Seniors.] 2 hrs. 2d term.

An account of some of the attacks upon the current doctrines of Political Economy, especially on the part of the socialists. Open only to those who have completed a course in Political Economy.

Professor ROBINSON :—

15 *Law.* [Seniors.] 1 hr. both terms.

This course is for those who do not intend to study law, and embraces topics which are of practical importance to every citizen, especially the following: the ownership and transfer of property; the law of the domestic relations; mercantile law in its several branches; wills; estates; guardianships; trusts; and corporations.

16 *Jurisprudence.* [Seniors.] 1 hr. both terms.

This course is for those who do expect to study law, and includes the following subjects: nature and history of the common law; statute law; codes; rights; wrongs; remedies; courts of law and equity; procedure; constitutional and international law; literature of the law; methods of legal study, etc., etc.

III. HISTORY

Professor WHEELER :—

17 *History of Europe since 1789.* [Seniors.] 2 hrs. both terms.

Mainly political; introductory to European politics of our day.

18 *English History, general course.* [Sen.] 3 hrs. both terms.

Political and constitutional. Particular attention is given to the origin and development of the system of self-government. The course is of especial value to those who intend to study law.

- 19 *English History*, special course. [Sen.] 2 hrs. both terms.
Attention is confined chiefly to the Tudor and Stuart periods.
Constitutional liberty vs. arbitrary power.

NOTE.—The loan library of History, founded by the liberality of about twenty graduates of the University, is for the use of students in the historical courses. It contains at present nearly 500 volumes, relating chiefly to the subjects of courses 17, 18, and 19. Other works which may be needed, will be added to the collection from time to time.

Professor ADAMS :—

- 20 *Mediaeval Civilization*. 2 hrs. both terms.

The object of the course will be to trace the development of political, intellectual and religious civilization through the transition period which lies between ancient and modern history.

- 21 *The Revival of Learning and the Age of Discoveries*.
1 hr. both terms.

Under the general title will be included a study of the rapid advance along all the lines of civilization which closes the middle ages and opens modern history.

- 22a *American History*. 2 hrs. 1st term.

Colonial History to 1765. Doyle's History of the United States and Lodge's Short History of the Colonies are used as the basis of instruction.

- 22b *American History*. 2 hrs. 2d term.

History of the United States from 1765 to 1865. Special attention is paid to constitutional questions.

Mr. TAFT :—

- 23 *Roman History*. 2 hrs. both terms.

History of the Empire, beginning with a brief review of the decay of republican institutions.

IV. MODERN EUROPEAN LANGUAGES

Professor KNAPP :—

- 24 *Old French*. 2 hrs. both terms.

Earliest monuments, ixth-xith centuries—Roman de Rou, xii—Aucassin et Nicolète, xiii.

- 25 *Scientific French*. [Seniors.] 2 hrs. both terms.

Rapid readings in connection with Professor Sumner's course on Social Science.

- 26 *French Normal Course.* 2 hrs. both terms.
Special study of French syntax with original composition.
Admission subject to examination.
- 27 *Spanish, Advanced.* 2 hrs. both terms.
Readings in modern literature, composition, and conversation.
- 28 *Spanish, Elementary.* 2 hrs. both terms.
Grammar and exercises. Rapid reading in Novels by Fernan
Caballero, Ant^o. de la Trueba, and Galdós.
- 29 *Italian, Advanced.* 2 hrs. both terms.
Manzoni's Promessi Sposi. Dante.
- 30 *Italian, Elementary.* 2 hrs. both terms.
Grammar and Exercises. Rapid reading in stories by dall'
Ongaro, M. d'Azeglio, etc.

M. EUGÈNE BERGERON :

- 31 *French.* 3 hrs. both terms.
Corneille, Molière, Boileau, Histoire de la littérature française.
- 32 *French.* 2 hrs. both terms.
Advanced composition and conversation. Readings in authors
of the sixteenth century.
- 33 *French.* [Sophomores.] 2 hrs. both terms.
Paris reviews and journals, conversation, and composition.
- 34 *French.* [Freshmen.] 3 hrs. both terms.
Prose composition. Ohnet's Le Maître de Forges. Duruy's
Histoire de France.

Mr. GOODRICH :—

- 35 *German Drama.* 3 hrs. both terms.
Critical study of selected plays from Lessing, Goethe, and
Schiller.

Mr. STRONG :—

- 36 *Elementary (Freshman) German.* 3 hrs. both terms.
- 37 *German Prose.* 3 hrs. both terms.
Selections from historical and critical works, with special refer-
ence to German history, literature and civilization.
- 38 *German, Second Year.* [Sophomores.] 2 hrs. both terms.

Professor BEERS :—

39 *18th and 19th Century Literature.* [Sen.] 2 hrs. both terms.

Literature of England from 1688 to 1870. Authors from Pope to Browning will be studied, partly by critical readings in the class-room, partly by outside assigned reading in connection with the English loan library, and partly through lectures and text-books.

40 *Elizabethan and Stuart Literature.* [Sen.] 2 hrs. both terms.

Saintsbury's Elizabethan Literature will be used as a text-book. Selections from Spenser, Shakspeare, Bacon, Jonson, Milton, and Browne will be read in the class-room; and portions of the writings of Raleigh, Sidney, Fletcher, Donne, Herrick, and other authors of the period will be assigned for outside reading and examination. Lectures.

41 *Anglo-Saxon and Early English.* 2 hrs. both terms.

Texts used: Sweet's Anglo-Saxon Primer, First Middle English Primer, Selected Homilies of Aelfric, Alfred's Orosius, and Cynewulf's Elene (Zupitza's edition).

Mr. J. E. WHITNEY :—

42 *Elizabethan Literature.* [Juniors.] 3 hrs. both terms.

Spenser's Faerie Queene, Books i and ii. Dowden's Shakspeare Primer, Shakspeare's Plays, Milton's Minor Poems and Paradise Lost. The History of the Literature will be followed in a text book and by lectures. A connected course of outside reading will include extracts from Child's English Ballads, Spenser's Faerie Queene, Book iii, and Minor Poems, Marlowe, Shakspeare, Jonson, Donne, Herbert, Herrick, Cowley, Marvell, and others.

43 *English Language.* 2 hrs. 1st term.

Lounsbury's History of the English Language. Lectures. Studies of the language with Skeat's Etymological Dictionary.

44 *14th Century Literature.* 2 hrs. 2d term.

Chaucer's Canterbury Tales and Minor Poems. Parts of Langland's Vision of Piers the Plowman, in Skeat's smaller edition. Selections from other early English writers. A connected course of outside reading will include Maundeville's Travels, Extracts from Child's English Ballads, Wyclif, and others.

Mr. McLAUGHLIN :—

45 *Restoration Literature.* 2 hrs. 1st term.

Selections from the principal Restoration writers, with a special study of Dryden.

- 46 *English Prose.* 1 hr. 1st term.
 Selections from the leading prose writers from Hooker to Clarendon. (A large amount of difficult reading will be required.)
- 47 *Old English Dramatists.* 2 hrs. 2d term.
 Rapid reading of plays of Marlowe, Jonson, Dekker, Beaumont and Fletcher, Webster, Middleton, Massinger and Ford.
 (The portions of authors selected for reading in the various English courses are in no cases the same.)

V. ANCIENT LANGUAGES AND LINGUISTICS

Professor HARPER :—

- 48 *Hebrew (first course).* 2 hrs. both terms.
 Genesis i-viii, and with these chapters the principles of the Hebrew language; critical reading of selected chapters in the Pentateuch; portions of the Book of Judges; lectures on Hebrew poetry and Hexateuchal criticism.
- 49 *Hebrew (second course).* 2 hrs. both terms.
 Prophets of the Pre-Assyrian period; advanced Hebrew grammar; Hebrew syntax; principles of textual criticism; exercises in sight-reading.
- 50 *Arabic.* 2 hrs. both terms.
 Arabic version of Genesis, chapters i-iii, and with these chapters the principles of the language (Lansing's Arabic Manual); selected portions of the Kuran; lectures on contents and arrangement of the Kuran.
- 51 *Assyrian.* 2 hrs. both terms.
 Principles of the language; selections in cuneiform text, Lyon's Assyrian Manual, and Delitzsch's *Lesestücke*; lectures on Assyrian History and Literature.
- 52 *Old Testament Wisdom-Literature.* 2 hrs. both terms.
 Including Job, Proverbs, Ecclesiastes, Canticles, and Selected Psalms, with (1) a consideration of their origin, structure, characteristics, and purpose, and (2) a study of Hebrew Wisdom, its history, form, contents; its relation to the Law, and to Prophecy; its relation to the philosophy of other nations.

Professor W. D. WHITNEY :—

- 53 *Sanskrit.* 4 hrs. both terms.
 A first year's instruction in Sanskrit, beginning with the instructor's Sanskrit Grammar, and passing on to Lanman's Reader. A sketch of Sanskrit literature is given in connection with the exercises during the latter part of the year.

54 *Linguistics.* 1 hr. 2d term.

A series of exercises—mingled lecture, recitation, and discussion—on the leading topics of the general study of language, following and using as text-book the instructor's *Life and Growth of Language*, is given if a class of six or more is formed.

Professor PECK :—

55 *Early Latin.* 1 hr. both terms.

Study of Inscriptions and of the ante-classical Literature, based on Allen's *Remnants of Early Latin* and Smith's *Latin Selections*.

(This course will be largely philological and critical, and is open only to those who have already done superior work in Latin.)

56 *Latin Composition.* 2 hrs. both terms.

Written and colloquial exercises. It is intended that during the second term the criticisms and discussions shall be in Latin.

57 *Tacitus, Suetonius, Lucretius, Vergil.* 3 hrs. both terms.

Government and character of Tiberius. Latinity of the Silver Age. Philosophy, Latinity, and literary characteristics of Lucretius. Position of Vergil in Latin literature.

58 *Horace and Tibullus.* 2 hrs. 1st term.

Ethical system and literary canons in the Epistles of Horace. Ramsay's *Selections from Tibullus*. The Augustan era of Latin poetry.

59 *Cicero.* 2 hrs. 2d term.

Book i of *de Oratore*; the speech for Murena. Brief history of Roman Oratory. Cicero's forensic theory and practice.

Professor H. P. WRIGHT :—

60 *Juvenal and Martial.* 2 hrs. 1st term.

Satires i, iii, iv, v, vii, viii, with selections from Martial, with special reference to a study of the private life of the Romans.

Mr. ABBOTT :—

61 *Cicero.* 2 hrs. 1st term.

The *Tusculan Disputations*, especially books i-iii, with some consideration of the philosophical and ethical opinions of Cicero.

62 *Plautus and Terence.* 2 hrs. 2d term.

The *Rudens* and *Menaechmi* of Plautus and the *Hauton Timorumenos* of Terence.

Professor SEYMOUR :—

- 63 *Homer.* 2 hrs. 1st term.
Introduction to the critical study of Homer; interpretation of the first books of the Iliad.
- 64 *The Phædo of Plato.* 2 hrs. 1st term.
Introduction to the literary and philosophical study of Plato.
- 65 *Homer.* 2 hrs. 2d term.
Rapid reading of the principal parts of the Iliad.
- 66 *Greek Inscriptions.* 2 hrs. 2d term.
Exercises in the interpretation of Greek Inscriptions based upon Cauer's *Delectus Inscriptionum Graecarum*, as an introduction to the historical study of Greek forms.
- 67 *Theocritus and Aristophanes.* 2 hrs. 2d term.
Fifteen idylls of Theocritus and the Frogs of Aristophanes.
- 68 *Aristotle.* 2 hrs. 2d term.
Nicomachean Ethics.

Assistant Professor REYNOLDS :—

- 69 *Euripides.* 2 hrs. 1st term.
Rapid reading of Iphigenia among the Taurians, Hippolytus, and Hercules Furens.
- 70 *Demosthenes.* 2 hrs. 1st term.
The Philippic and Olynthiac orations, with the history of the times.
- 71 *Greek Composition.* 1 hr. 2d term.

Mr. KITCHEL :—

- 72 *Plato.* 2 hrs. 1st term.
Apology and Crito.

VI. NATURAL AND PHYSICAL SCIENCE

Professor LOOMIS :—

- 73 *Practical Astronomy.* [Seniors.] 4 hrs. 1st term.
Loomis's Practical Astronomy. Students have the free use of a portable transit instrument for observations.
- 74 *Meteorology.* [Seniors.] 2 hrs. 2d term.
Loomis's Meteorology. Daily study of the current weather maps of the signal service.

Professor J. D. DANA :—

- 75 *Geology*. [Seniors.] 2 hrs. 1st term.
Geology—physiographic, lithological, and historical.

- 76 *Geology*. [Seniors.] 2 hrs. 2d term.
Remainder of the historical Geology and dynamical Geology.

- 77 *Advanced Geology*. [Seniors.] 2 hrs. both terms.
In connection with the study of the Manual, the reading and discussion of original memoirs and other publications treating of the topics in the course, together with work in the field. Excursions. Open only to advanced students in Geology, who have also some knowledge of Chemistry and Mineralogy.

Professor EATON :—

- 78 *Botany*. [Juniors.] 2 hrs. 2d term.
The course is limited to twenty who pass the best examination in Gray's Lessons in Botany.

- 79 *Pteridology and Bryology*. [Seniors.] 2 hrs. 1st term.
The course is limited to six who do best in the botany of Junior year. The two hours constitute a single exercise weekly.

Professor A. W. WRIGHT :—

- 80 *Physics*. [Seniors.] 2 hrs. both terms.

Two exercises each week, chiefly practical work in the Sloane Physical Laboratory, with measurements, especially in heat, light, and electricity, each exercise occupying two hours. As introductory to the laboratory practice, the exercises, during a portion of the first term, consist of recitations or discussions upon the theory and methods of physical measurements, the use of instruments, and other special topics. Laboratory facilities are also accorded to students of the course at other times than those of the stated exercises. Kohlrausch's Physical Measurements; Glazebrook and Shaw's Practical Physics; Kempe's Handbook of Electrical Testing; Everett's Units and Physical Constants, etc.

In case the number of applicants is greater than can be accommodated, preference is given to those having a higher standing in Physics and Mathematics.

Professor E. S. DANA :—

- 81 *Mineralogy and Crystallography*. 2 hrs. both terms.

Practical study of mineral species by means of blowpipe analysis and other methods; mathematical study of crystals by the methods of analytical and spherical trigonometry, as also of their

optical properties. The time will be divided about equally between the two parts of the subject; the practical exercises may be prolonged to cover two hours when but little outside preparation is called for.

82 *Descriptive Mineralogy.* 1 hr. both terms.

Advanced course in the study of mineral species for those who have already gone through course 81.

83 *Petrography.* [Seniors.] 1 hr. both terms.

The study of rocks, chiefly by the microscope, involving also a preliminary study of the form and optical characters of the minerals common in crystallized rocks. The exercise may be extended over two hours. Limited to those taking course 81.

Professor GOOCH :—

84 *General Descriptive Chemistry.* 3 hrs. both terms.

Chiefly practical exercises in the laboratory, supplemented by lectures and recitations.

85 *Analytical Chemistry.* 3 hrs. both terms.

Chiefly laboratory work; open to students who take course 87, or who can show that they are fitted to pursue the study.

In each of these courses two hours in the laboratory will be counted as the equivalent of a single recitation hour, but the further use of the facilities of the laboratory, at specified hours other than those of the regular exercises, will be permitted and encouraged.

In each course a special laboratory fee is charged.

[Courses 86, 87, 88 with course 84, constitute a connected and continuous line of study in Biology, extending through the Junior and Senior years. The Senior courses are not open until 1889.]

Professor CHITTENDEN :—

86 *Physiology.* [Juniors.] 1 hr. both terms.

Huxley's Lessons in Elementary Physiology, with occasional lectures and illustrative experiments. Also portions of Foster's Physiology with demonstrations. This course is designed as a preparation for courses 88 and 87 of Senior year.

87 *Physiological Chemistry.* [Seniors.] 4 hrs. 2d term.

Four exercises a week, of a minimum of two hours, each in the laboratory of physiological chemistry. This forms a continuation

of course 88 and is open only to those who have taken courses 84 and 86 in Junior year. The time will be devoted mainly to a study of the chemistry of the connective, contractile and nerve tissues, of the chemical processes of salivary, gastric and pancreatic digestions, and so far as the time will allow, of other subjects connected with the physiology of nutrition.

A short course of lectures by Professor S. I. Smith on Embryology, and a somewhat longer one by Professor Chittenden on Experimental Toxicology will also be open to students in the above course.

A laboratory fee will be charged for courses 87, 88. The student in addition must bear the expense of gas, flasks, etc., which should not exceed ten dollars.

Professor S. I. SMITH :—

88 *Elementary Anatomy and Histology*. [Sen.] 4 hrs. 1st term.

Laboratory work based on Huxley and Martin's Practical Biology. Four exercises, of a minimum of two hours each. The time will be devoted principally to practical work with the microscope and to dissecting, with special reference to the rudiments of biology and the elements of the morphology of animal tissues. The student will be required to make microscopical preparations, keep careful records of his work, and pass frequent examinations. Open only to those who have taken courses 84 and 86 in Junior year, and to be followed by course 87, 2d term.

VII. MATHEMATICS

It is strongly recommended by all the instructors in the mathematical department that those who intend to study advanced mathematics or the natural and physical sciences, or who expect to become engineers, should take course 89 in the Calculus in Junior year.

Professor NEWTON :—

89 *Calculus*. 3 hrs. both terms.

90 *Integral Calculus and Mechanics*. [Sen.] 3 hrs. both terms.

Mean values and probability; differential equations; analytical statics and dynamics.

91 *Shooting Stars and Meteors*. [Seniors.] 1 hr. both terms.

The mathematical theories of these bodies, and the treatment of the observations of them.

Professor GIBBS :—

- 92 *Vector Analysis.* [Seniors.] 2 hrs. 1st term.
Elementary course, in which the simpler problems of geometry, kinematics, and mechanics are treated by vector methods.
- 93 *Vector Analysis.* [Seniors.] 2 hrs. 2d term.
Advanced course, open only to those who have taken the preceding.
- 94 *Computation of Orbits.* [Seniors.] 1 hr. both terms.
Vector methods will be used, and the course is open only to those who take course 92.

Professor RICHARDS :—

- 95 *Higher Trigonometry.* 1 hr. both terms.
Exponential and logarithmic series; DeMoivre's theorem; theory of proportional parts; applications. Calculus desirable but not required.

Professor PHILLIPS :—

- 96 *Analytical Geometry.* 1 hr. both terms.
Casey's Treatise on Conic Sections is made the basis of instruction. The methods are extended to Geometry of three dimensions.
- 97 *Descriptive Geometry.* 1 hr. both terms.
The principles of orthographic projection, and shades and shadows.

Assistant Professor BEEBE :—

- 98 *Geodesy.* 1 hr. both terms.
Trigonometrical surveying; figure of the earth; problems in practical Astronomy; methods of the United States Coast Survey. Some time will be given to the use of the theodolite. Students who desire to do so can take in addition one hour per week in practice in the use of instruments.
- 99 *Descriptive Astronomy.* 1 hr. both terms.
Newcomb's Popular Astronomy; Clerke's History of Astronomy.

Mr. E. H. MOORE :—

- 100 *Theory of Functions.* [Seniors.] 2 hrs. both terms.
Algebraic functions, functions defined by series, definite integrals between complex limits, general properties of functions of

the complex variable. Briot et Bouquet's *Théorie des Fonctions Elliptiques* will be the basis of instruction. Open only to those who have taken the Calculus.

- 101 *Modern Synthetic Geometry.* 1 hr. both terms.
Cremona's *Elements of Projective Geometry* will be used.
The Calculus is not required.
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The following statements are added, to explain the general aim and scope of the instruction in various leading subjects of study.

GREEK—During the first two years, the student reads five or six books of Homer, dramas of Aeschylus, Sophocles, and Euripides, one or two comedies of Aristophanes, selections from the history of Herodotus, one or more orations of Demosthenes, Isocrates, or Lysias, the *Apology* or some dialogue of Plato; occasionally, the *Symposium* of Xenophon or selected dialogues of Lucian. These works are selected with a view to making the student familiar with the leading branches of Greek literature, and the most interesting phases of Greek life and thought. The most important grammatical principles are reviewed in Freshman year; in Sophomore year, grammatical questions are discussed rarely, except as they are necessary for the interpretation and illustration of the author's meaning. In reading the works of the poets, less attention is paid to linguistic and grammatical points than to their literary quality, to the structure of the poems, to poetic words, forms, arrangement of words, rhythm, and constructions; but the growth and development of the language are discussed as well as the development of the literature. In reading the orators and historians, the connection of thought and of events is made prominent. Greek prose composition is practised only so far as to aid the student in reading Greek authors, and to quicken his perception of nice distinctions in the order and choice of words and constructions.

In the optional courses of the Junior and Senior years, the student has the opportunity of reading the works of the lyric poets, other Greek dramas and other dialogues of Plato, parts of Aristotle (his *Politics* and *Ethics*), and the idyls of Theocritus; as well as of studying Greek inscriptions, and of doing more critical work on the Homeric poems than is suited to the first College year; and of learning the Modern Greek language. The history of Greek philosophy is studied. Students may also attend Professor Hoppin's fully illustrated lectures on Greek art, in the Art School.

LATIN is continued as a required study till the close of the Sophomore year, when it is intended that the student shall have gained clear con-

ceptions of the genius of the language and its relations to other ancient and to modern tongues, a good knowledge of the characteristics of Latin literature and the essential facts of Roman history, and some appreciation of the position of Rome in the history of civilization. That subsequent reading of the language may be more easy and more exact, due attention is given in the early part of the course to forms, constructions, and idioms. From term to term the study of the literature is made more prominent, and the particular texts are treated as means for the study of the public and private life of the Romans. Instruction is given mainly by recitations, but such work is supplemented by occasional lectures by the instructors and by conferences on papers presented by the pupils. In connection with the minute study of the authors, considerable time is given to oral and written reading at sight, and to composition in Latin.

For Juniors and Seniors who desire to continue their Latin studies parallel courses are offered by different instructors, with different ends in view and by different methods. The characteristic of a course may be, *e. g.*, literature, or history, or philology, or antiquities, or the speaking and writing of Latin, and the methods of preparation and the classroom treatment vary accordingly. Topics suggested by the nature of the courses, or by individual tastes and intentions, are assigned to students, and papers thus prepared are discussed before the class. Lectures and the rapid reading of large amounts of text are more frequent than in the prescribed courses. The connection of Latin with English is emphasized, and written translations are from time to time required and criticised with reference both to their faithful reproduction of the Latin thought and their idiomatic English. German annotated editions are often used, not only for their intrinsic helpfulness, but also to encourage the practical use of that language. Students who give evidence of unusual capacity and attainments may be admitted to membership of graduate classes.

MATHEMATICS—In Geometry the exercises consist in recitations from the text-book, the original demonstration of theorems, and applications of the principles to the solution of numerical problems.

After the student has gained facility in the use of trigonometrical tables, the principles of Plane Trigonometry are applied to the problems of Mensuration, Surveying, and Navigation, and those of Spherical Trigonometry to the elementary problems relating to the celestial sphere.

In Algebra the elementary principles of the theory of equations are illustrated graphically, and the student is exercised in the numerical solution of equations of the higher degrees and the graphical representation of the relations of quantities.

In Analytical Geometry the student is carried through the elementary properties of the lines and surfaces of the second degree, and is introduced to the theory of map projection.

These are studies of the Freshman and Sophomore years, and together with the elements of Astronomy which are pursued in Junior year, are regarded as essential parts of a liberal education.

In the Junior and Senior years opportunity is given in the elective courses to obtain a wider knowledge of Analytical Geometry and Trigonometry with their applications to Geodesy and Astronomy. A course is provided in Junior year in Differential and Integral Calculus, designed for such as expect to make a serious study of any department of pure or applied mathematics.

In Senior year advanced subjects in the Calculus and the elements of Analytical Mechanics form one line of study.

An elementary and an advanced course are provided in what is called Vector Analysis. The object of these courses is to introduce the student to the methods of multiple algebra in geometry, mechanics, and physics. The matter taught is not entirely unlike that usually given in courses in Quaternions, but the method followed is in some respects nearer to Grassmann's than to Hamilton's. The elementary course is confined to the simplest algebraic relations of vectors. The advanced course includes differentiation with respect to position in space, and the theory of linear vector functions.

Students who show special aptitudes are exercised in the working up of subjects which require the use of the library and more prolonged investigation than the daily exercises of the class-room. Such work begins in Freshman year. There is a considerable collection of models which are used to assist the imagination in the various branches of study.

ENGLISH—Two terms of English are prescribed in Sophomore year. The first deals with prose style as illustrated by selected essays of Addison, Steele, Burke, Lamb, DeQuincey, Macaulay, Carlyle, and Ruskin; this work is associated with rhetorical praxis. The second term is devoted to four plays of Shakspeare: the study is literary, rather than philological or antiquarian.

A course in Elizabethan literature with three exercises a week is given through Junior year. The central line of work to which chief attention is paid includes the lives of Spenser, Shakspeare, and Milton, the first two books of the Faery Queene, six or eight of the most important of Shakspeare's plays, Milton's minor poems, selections from his prose, and the whole of Paradise Lost. Kitchin's edition of the Faery Queene, Books i and ii, Dowden's Shakspeare Primer, editions of separate plays of Shakspeare by Rolfe and in the Clarendon Press series, and Masson's edition of Milton's Poems, will be used as a basis for the work this year. Lectures are given on the literary history and various subjects connected with the course. Supplementary readings are required in Spenser, Marlowe, Shakspeare, Jonson, Donne, Cowley, Herrick, Herbert, Milton, Marvell, and others.

A course in English literature of the 14th and 15th centuries is open to Juniors and Seniors. Morris's edition of *The Prologue*, etc., Skeat's edition of the *Prioresses Tale*, etc., in the Clarendon Press series, and Lounsbury's edition of the *Parlament of Foules*, an edition of the *Canterbury Tales*, Skeat's edition of *Piers the Plowman*, and his *Specimens of English Literature*, will be used this year. Lectures are given on the literary history of the period, the manners and customs of the times, and other subjects illustrative of the work. Supplementary readings are required in Child's *English Ballads*, *Mandeville*, and others.

There is also a course in Restoration literature, open to Juniors and Seniors. The earlier parts of the classical school are read in selections, and Dryden's poetical work is taken up in detail. Selected readings are required in the prominent prose writers and dramatists of the period. The instruction is given entirely by lectures, with frequent examinations.

A two hours' elective is also offered to the Junior and Senior classes in the leading dramatists from 1587 to 1640. Lectures are given on the origin and earlier development of English dramatic literature, on the actors, theatres and various stage-details of the Shaksperian period, and on the literary characteristics of the authors read. In the recitation work special attention is directed to dramatic analysis.

An elective course of two hours a week through Senior year is devoted to the history of modern English literature, from 1688 to 1870. Portions of the writings of Pope, Burns, Browning, and possibly other authors, are read in the class-room. Selections from DeFoe, Swift, Addison, Goldsmith, Johnson, Burke, Collins, Gray, Cowper, the Eighteenth Century Novelists, Wordsworth, Coleridge, Scott, Landor, DeQuincey, Byron, Shelley, Keats, Tennyson, Carlyle, Thackeray, George Eliot, Ruskin, Matthew Arnold, Clough, Rossetti, and Swinburne, are assigned for outside reading to be followed by examinations. A series of thirty lectures is given in connection with this course, covering the authors named and the general literary history of the period. Perry's *English Literature in the Eighteenth Century*, Oliphant's *Literary History of England*, and Stedman's *Victorian Poets*, are used as reference or text-books. Opportunity is given for optional work in addition to the required course.

An elective course of two hours a week through Senior year is devoted to the history of Elizabethan and Stuart literature from 1579 to 1660. Selections from Spenser, Shakspeare, Bacon, Jonson, Milton, and Browne are read in the class-room. The literary history of the period is followed in Saintsbury's *Elizabethan Literature*. Representative writings of the principal Elizabethan, Stuart, and Commonwealth authors are assigned for outside reading, and the students are required to prepare and submit notes of their reading. Lectures are given from time to time on special portions of the subject.

A special library of from twenty to forty duplicate copies of the most useful editions of many writers has been established for supplementary readings. This library will be enlarged from time to time.

A course in the history of the English language is open to Juniors and Seniors. After finishing a text-book, the English vocabulary is studied in specimens of the speech of different periods and in groups of words introduced from various languages, showing thus the condition and changes of the vocabulary at different times, its composite nature, and the relative value of the contributions from other languages. Lounsbury's *History of the English Language* and Skeat's *Etymological Dictionary* are used in the course the present year.

English composition is prescribed through the whole of the Sophomore and Junior years. In the former, during the first term compositions are written as weekly class-room exercises; sketches, descriptions, brief narratives and the lighter forms of the essay are preferred to pieces on more difficult or bookish themes. During the rest of the year five essays of a more elaborate character are written; and in the Junior year two essays in each term. Each student's work is criticised at least once during every term; in cases where special instruction is needed, as well as in all cases where it is desired by the writer, each composition is discussed in private interviews. Literary practice is also encouraged by three public exhibitions during the course; two at the end of the Senior year, the third about the middle of the Junior year. Those competing for the last receive special instruction whenever they desire it.

GERMAN—The student may pursue the study of German during each of the four years of his College course, if he so elect. While the study may be begun at the opening of any of the four years, it is strongly urged that the elementary work be done as early in the College course as possible, in case the student proposes to take up the language at all.

The courses of work for the successive years may be outlined as follows. During the first year the work consists of German grammar, translation of easy English phrases, sentences, and stories into German, and of easy German prose into English. Constant sight-translation is used as a means for developing and strengthening the student's vocabulary and for freeing him from dependence upon the lexicon and from the word-by-word methods which its use encourages. Especial care also is devoted to pronunciation. The work of the second year continues and extends that of the first year, taking up the translation of German prose, narrative, critical, and historical, composition, and sight-translation. Throughout the two years the aim in reading German is to cover as much ground as possible—from 500 pages upwards—in the belief that thereby the student will acquire more command of the language than when a smaller amount is read with rigid attention to grammatical details. It is expected that at the end of the second year

the student will be able to use the language in his work in other branches of study. Those, therefore, who are studying German solely with this end in view may perhaps abandon the language at this point; but no student should begin the language unless he expects to devote at least two years to its study.

For the remaining years the elective courses vary from year to year; but opportunity is given for the critical study of some of the masterpieces of German literature and for the study of periods in its history. Those who so elect may also have opportunity to take up the earlier German literature and to study the historic development of the grammar of the language. In this latter course all work will be done in German.

German readings are given by the instructors outside the regular College work, and advanced classes in composition formed, where German alone is spoken. German is constantly read aloud in the class-room, and all efforts, both in the class-room and in private, are made to improve the student's pronunciation and to help him to acquire some facility in expressing his ideas in German. But it is not a leading aim in the instruction in German to enable the student to converse in that language. Training in the ordinary conversational idiom may be had more profitably elsewhere and cannot form any considerable part of the class-room work. The student may acquire the language as a tool for use in other departments of study and may come in contact with the best works of German literature, studying their form and contents, and the lives and environment of their authors; fluency in conversation must be acquired where the conditions are more fitted to the object which they are to effect.

FRENCH—This course may extend through the entire four years, involving the study of the leading epochs of the language and literature from their inception to the present; embracing especially, with reference to English origins, the *Norman* dialect of the Old French as exhibited in the *Chanson de Roland*, the *Roman de Rou*, and the *Fabliaux* of Marie de France; in the xv. and xvi. centuries the works of Villon, Marot, Rabelais, and Montaigne, as representatives; the drama from the earliest *Mystères*, *Farces*, *Soties*, to Garnier, Corneille, Molière, and Racine; in satire and criticism, Boileau; dwelling particularly on the foreign and national influences that moulded the language till it assumed its actual form. Attention throughout the earlier years is given to composition in French as the best method for training the attention, the memory, and the judgment, and the oral use of the language is insisted on for the courses in the Classical and Old French periods. Instruction is given by recitation, and lectures in French will be read on the history of the language and literature, on which written French examinations will be required.

PHYSICS—The required course in Physics extends through the year with three exercises weekly. The general design of the course is to make the student acquainted with the fundamental principles of the science, to enable him to understand something of the methods of experiment and reasoning by which physical laws have been established, and to give him an insight into the degree of accuracy demanded in physical work. The subject of Electricity is treated at somewhat greater length than the other branches, and is fully illustrated by experimental lectures; in this direction the recent equipment of the Sloane Laboratory makes the department especially strong. During the Senior year there is an opportunity for those students desiring to avail themselves of it, to go forward with practical laboratory work, as is described in the list of elective courses.

CHEMISTRY—The study of this subject is optional. During the current academic year a course of descriptive chemistry and a course of analytical chemistry are open to Seniors and Juniors. Instruction in the former course is given in practical exercises in the laboratory, supplemented by demonstrations in the lecture room. Frequent examinations serve to emphasize the more essential principles and lines of argument, as well as to test the progress of the student. It is the aim of this course to teach the elementary facts and principles of chemistry by the inductive and experimental method.

The second course is necessarily a laboratory course. The facilities of the laboratory and the aid of personal supervision are at the disposal of graduate students.

It is intended that new courses of study shall be offered as rapidly as students are trained to the degree of preliminary knowledge necessary.

POLITICAL SCIENCE AND LAW—The instruction in the elements of Political Economy is intended to give familiarity with the method and doctrines of the so-called "orthodox" economists, as the proper introduction which the student should have to the science, and as the basis for whatever may be offered later. Text-books are used with set lessons, constant examinations, both written and oral, discussions, and illustrations. The courses are arranged in the belief that the student will gain more under a classification which is adjusted to meet differences of interest and capacity. Those who take Political Economy in Junior year have an opportunity in Senior year to become acquainted with the history of the science and the controversies now going on in it, and to study more thoroughly special topics. In the course on Anthropology they are also offered an opportunity to become acquainted with the new sciences whose investigations are so important for the whole field of social science.

The course in law treats of municipal and international law as

parts of a liberal education. The object is to study civil institutions, both in their theory and in their positive form. The instruction is elementary, dealing with the fundamental facts and principles which underlie the civil polity of the American State, and is intended to give the student a correct knowledge of such essential facts about the life of the State and its accepted doctrines, as every educated man should possess, as well as to lead up to the professional study of law.

MENTAL AND MORAL SCIENCE, AND PHILOSOPHY—The courses in this branch of study begin in Junior year, and continue until graduation. During two-thirds of Junior year and the whole of Senior year, three hours per week of class-room work in Logic, Psychology, Ethics, and the Evidences of Religion, are required of every student; the remainder of the work in these and kindred subjects is elective.

LOGIC—In this subject there is an elementary required course, occupying three hours a week during the first half of the second term of Junior year. In this course attention is centered on the principles of correct definition and valid proof. A large part of the work of the students consists in the oral and written discussion of examples of definition and of deductive and inductive argument, the examples being partly in the condensed form usual in text-books on Logic, partly in the form of somewhat extended quotations from various authors on subjects of general interest. At the same time, and although the minutiae of the traditional Logic are ignored, pains is taken to secure the disciplinary value of the study as a training in abstract thinking and abstract statement.

PSYCHOLOGY—Required work in this subject begins with the last half of the second term of Junior year and continues into Senior year,—the course thus comprising about twenty weeks of instruction in all. Although the earlier part of the course is taught with constant use of a text-book, upon which daily recitations are exacted, considerable time from the first is taken by the teacher in oral instruction, critical or supplementary of the text. One or more formal lectures on selected topics in Psychology are given each week. During the later part of the course, after the pupils have acquired some facility in the general subject, the instruction is chiefly by lectures upon the basis of a text-book. The course is completed by lectures discussing the doctrine of the Mind's nature, and its relation to the body. The course in Physiological Psychology extends through the entire year and is taught by lectures and recitations; it is illustrated by constant use of models, charts, histological preparations, apparatus for mixing color-sensations, etc. It is designed to go briefly over the whole ground of the modern experimental and physiological study of mental phenomena; especially as regards reflex and automatic cerebral action, the localizing of cerebral

function, the quality and quantity of sensation, psychometry, and the physical basis of the higher faculties. It may be elected either in Junior year as preparatory, or in Senior year as supplementary, to the required course in introspective Psychology.

HISTORY OF PHILOSOPHY—The study of this subject is elective and confined to Senior year. In the study of the History of Greek Philosophy the principal emphasis is laid upon Plato and Aristotle, and upon the post-Aristotelian Schools, as illustrating the permanent and most interesting problems of Philosophy.

The course in Modern Philosophy extends through the whole of the Senior year. The subject is taught both by recitations from the textbook, with accompanying remarks from the teacher, and by lectures. Effort is made to secure from each pupil the careful reading of at least one work of some prominent philosopher of the period considered in the class-room. Special emphasis is laid upon the philosophy of Kant. It is a constant aim to trace the development of modern speculative thought so as to throw light upon the principal questions in debate among present writers in philosophy.

PHILOSOPHY—In addition to the study of Philosophy as connected with the problems of rational Psychology, and as illustrated and enforced by the history of the development of Philosophy, the works of one or more of the leading authors are read and discussed, with such students as take the elective courses opened for this purpose. In this way the more general studies in Metaphysics and ethics are supplemented by special information regarding selected subjects and writers.

MORAL SCIENCE, as a study, is intimately connected with the instruction in Psychology and Philosophy, as its foundations are discovered in the constitution of the human soul, and its method and fundamental relations are justified and enforced by those principles which are essential to all scientific thinking. In the department of Moral Science and of Practical Ethics, a somewhat thorough course is required of the entire Senior class, as an essential element of a thorough education and an important condition for practical usefulness. This general course is supplemented by special classes in scientific and practical Ethics, and particularly in the history and criticism of ethical theories, which are maintained through the year. In connection with these courses, a full course of lectures is delivered upon the nature, evidences, and authority of Christian Theism and the Christian History, particularly as related to a sound ethical theory of man and his destiny. This course of lectures is attended by all the members of the Senior class, and a thorough examination enforced.

SPECIAL HONORS

Special Honors are conferred at the end of Senior year.

One-year honors may be taken in any one of the following groups of studies; two-year honors in any one of groups 2, 4-7:

(1). Philosophy. (2). Political Science, History, and Law. (3). English. (4). Ancient Languages. (5). Modern Languages (exclusive of English). (6). Natural and Physical Science. (7). Mathematics.

A candidate for a one-year honor must announce his intention to the Dean on or before December 1 of Senior year; a candidate for a two-year honor must report to the same officer by the same date of Junior year.

A candidate for a one-year honor must pursue with distinction in his Senior* year, and a candidate for a two-year honor in his Junior and Senior years, courses (whether prescribed or elective) amounting to an average of at least six hours per week in one of the specified groups. For a two-year honor the work must be so distributed that an average of at least four hours per week shall be taken in Junior year.

A candidate for either honor must present a meritorious thesis before May 1, of his Senior year.

[In the department of Modern Languages, elementary German will not be reckoned for honors. In the department of Mathematics, no student will be considered a candidate for honors, unless he has taken the Calculus.]

TERMS AND VACATIONS

THE PUBLIC COMMENCEMENT is held on the last Wednesday in June. The first term begins twelve weeks from the day after Commencement-day and continues thirteen weeks; the second term begins on the Tuesday after the first Thursday in January and continues until Commencement-day,

* But in group 3, work done in Junior year in English will be accepted in place of an equivalent amount of work done in Senior year.

with a Spring Recess—of eight days—including Easter. (See Calendar, p. 6.) The exercises of each term begin with prayers in the Chapel.

PUBLIC WORSHIP

PRAYERS are attended in the Battell Chapel, with reading of the Scriptures and singing, every week-day at 8.10 a. m., at which service the attendance of the students is required.

PUBLIC WORSHIP is held in the Chapel on Sundays, at which all the students are required to attend, except such as have special permission to attend the worship of other denominations, to which their parents belong. Such permission can be obtained only on presenting to the Dean a written request therefor from the parent or guardian.

DWIGHT HALL, a building erected on the College square, at the expense of Elbert B. Monroe, Esq., of Southport, Connecticut, and presented to the Corporation in 1886, is designed to furnish an attractive center for the religious life of the students of all the Departments, especially through the organized work of the Young Men's Christian Association of the University.

LIBRARIES AND READING ROOMS

The Library of the University, containing over 140,000 volumes, is open every week-day to all the students for consultation and for the drawing of books; in a separate part of the building is the Linonian and Brothers Library, a collection of over 30,000 volumes in general literature, specially selected for the use of the undergraduate students.

The College Reading Room, containing the principal newspapers and periodicals, American and foreign, is open to the students every day and evening without charge. There is also a reading room and a select library (partly for circulation and partly for reference) in Dwight Hall.

THE GYMNASIUM

THE GYMNASIUM is designed to provide all the students with opportunities for exercise, under the advice of a Medical Director, who is a regularly educated physician. Members of the Freshman Class are required, during a part of the year, to take exercise in light gymnastics under the instruction of the Medical Director; and any student may enter the class of general gymnastics, which is under the Medical Director's immediate care. A thorough physical examination and measurement of each student is made yearly by the Medical Director, and a record of these results is kept as a basis of advice as to exercise and regimen; an examination of this record shows that the standard of health of the average student improves during his College course.

Members of the other Departments of the University may avail themselves of the privileges of the Gymnasium (including the advice of the Medical Director, the use of the apparatus, bowling alleys, and shower-baths), on the payment to the janitor, in advance, of a small fee.

EXPENSES

THE TREASURER'S BILLS are made out and delivered to the students three times a year, viz: during the first week of December, the first week of March, and the first week of June, at which times they are payable. If not paid within two weeks of the time they are issued, interest is charged from the date of the bills, and the student is liable to be prohibited from reciting. Drafts on Boston, New York, and Philadelphia will be received at par.

The annual charge for tuition is \$125, and the charge for incidentals (including ordinary repairs, expenses of public rooms, gymnasium, libraries and reading room) is \$30. An additional charge of \$18 is made in the last bill of the Senior year, to cover the expenses of graduation.

ABSENCE ON LEAVE—A student who is absent from College on account of sickness, or for any other cause, and retains his place in his class, pays full tuition during such absence; such payment is required before the student can be admitted to examination.

BOARD is obtained at prices varying from three and a half to seven dollars a week. The average price is under five dollars.

Rooms—There are in the College buildings nearly two hundred and fifty rooms occupied by students, at prices varying (according to location) from fifty cents to six dollars per week. These rooms are not furnished, and the rates charged do not include heat or light.

Farnam Hall (built in 1869-70) is named in commemoration of Henry Farnam, Esq., of New Haven, who bore the chief part of the expense of its erection; Durfee Hall (built in 1870-71) commemorates in like manner the generosity of Mr. Bradford M. C. Durfee, of Fall River, Mass.; Lawrance Hall (built in 1885-86) owes its name to a gift for this purpose from Mrs. Francis C. Lawrance, of New York City, in memory of her son, Thomas Garner Lawrance, of the Class of 1884, who died during his Senior year in College.

Students living out of College are not allowed to room in any building in which a family does not reside, except by special permission of the Faculty.

The rooms on the fourth floors of North College and North Middle College (rented at prices ranging from \$1 to \$1.50 per week), and a few others in Durfee, Farnam, and Lawrance Halls (at higher prices), are reserved each year for members of the Freshman Class; these rooms are all heated by steam, for which an additional charge of from twenty-five to thirty dollars per year is made.

Applications for rooms from those who expect to enter the Freshman Class in this College in September, 1889, should be sent to Professor Henry P. Wright (the locating officer), not later than June 1. As no single rooms are reserved, every application should be signed by two persons who wish to occupy a room together.

Members of the Junior, Sophomore, and Freshman Classes, occupying any of the College rooms (except those on the fourth floors of North College and North Middle College) may retain the same rooms for another academic

year, by making application in writing to the locating officer, on or before Saturday, May 25, 1889. Rooms not reserved will then be offered to the three Classes in order: choices will be allotted to the Junior Class on Tuesday, May 28, to the Sophomore Class on Thursday, May 30, and to the Freshman Class on Tuesday, June 4.

PRICES PER WEEK OF ROOMS IN COLLEGE FOR 1889

When a room is occupied by two persons, each occupant will be charged with one-half the price named in this schedule. *Where a single person occupies alone a room having two bedrooms, each of which is directly lighted by an outside window, he will be charged ten per cent. in addition to the price set upon the room.*

\$0.50.—66, 67, 82 North Middle; 188, 189 Old Chapel.

\$0.75.—2, 3, 18 South; 49 South Middle; 65, 68, 81, 84 North Middle; 98, 99, 114 North.

\$1.00.—1, 4, 17, 20 South; 34, 47, 50, 63 South Middle; 79, 95 North Middle; 97, 100, 113, 116 North; 190, 191 Old Chapel.

\$1.25.—15, 31 South; 39, 43, 46, 55, 59, 62 South Middle; 71, 75, 78, 87, 91, 94 North Middle.

\$1.50.—7, 11, 14, 23, 27, 30 South; 38, 42, 48, 54, 64 South Middle; 74, 77, 80, 90, 93, 96 North Middle; 103, 106, 107, 110, 111, 119, 122, 123, 126, 127 North.

\$1.75.—6, 10, 13, 16, 22, 26, 29, 32 South; 40, 44, 45, 56, 60, 61 South Middle; 72, 76, 88, 92 North Middle; 133, 137, 141, 160, 167, 175 Farnam.

\$2.00.—8, 9, 12, 24, 25, 28 South; 37, 41, 53, 57 South Middle; 69, 73, 85 North Middle; 101, 104, 105, 108, 109, 112, 120, 124, 125, 128 North; 155 Farnam; 186, 187, 192, 193 Old Chapel.

\$2.50.—182, 183 Lyceum; 243 Lawrance.

\$3.00.—180 Lyceum; 250, 251, 260, 261, 270, 271, 281 Lawrance.

\$3.50.—142, 143, 158, 159, 161, 162, 176, 177 Farnam.

\$4.00.—130, 131, 134, 135, 138, 139, 140, 144, 145, 146, 147, 148, 149, 151, 152, 154, 156, 157, 164, 165, 168, 169, 172, 173, 174 Farnam; 282 Lawrance.

\$4.50.—129, 132, 163, 166, Farnam; 208, 215, 216, 223, 224, 231, 232, 239 Durfee; 248, 249, 258, 259, 268, 269, 279 Lawrance.

\$5.00.—178, 179 Lyceum; 202, 204, 206, 209, 210, 211, 212, 214, 217, 218, 219, 220, 221, 222, 225, 226, 227, 228, 229, 230, 233, 235, 237 Durfee; 241, 242, 245, 246, 247, 252, 253, 254, 255, 256, 257, 262, 263, 264, 265, 266, 272, 273, 274, 277 Lawrance.

\$5.50.—280 Lawrance.

\$6.00.—201, 203, 234, 238 Durfee; 278 Lawrance.

The subjoined table gives near estimates of the ordinary annual expenses in College, omitting clothing and vacation charges.

	Lowest.	General Average.	Very Liberal.
Treasurer's bill, tuition,	\$125	\$125	\$125
" " " incidentals,	30	30	30
Rent and care of half-room in College,	15	75	110
Board, 37 weeks,	110	200	270
Furniture, average of half-room for 4 years,	8	20	50
Fuel (steam-heat) and light, for half-room,	14	20	28
Washing,	10	25	42
Text-books and stationery,	10	30	50
Subscriptions (to Societies, Sports, Periodicals, etc.),		30	100
Private servant, for special care of room,			25
Sundries,	8	75	200
Total,	\$330	\$630	\$1030

BENEFICIARY AID

The sum of \$11,000 and upwards, derived partly from permanent charitable funds, is annually applied by the Corporation for the relief of students who need pecuniary aid, especially of those preparing for the Christian ministry. In this amount are included the income of the LANGDON FUND, of four thousand dollars, bequeathed in 1835 by Solomon Langdon, of Farmington, Connecticut, and a portion of the income of the ELLSWORTH FUND, now over sixty thousand dollars, received since 1858 from the estate of the Hon. Henry L. Ellsworth (Yale College 1810); both these funds are used for the support of students intending to enter the ministry.

There is also a LOAN FUND, for the benefit of needy students, which has been constituted from repayments made to the treasury by former students who have received aid during the College course. No deserving student who will make good use of the opportunities of the College need be deterred from entering it by the cost of tuition. Those needing aid should apply to the President before November 1st in each year of the College course. No assignments from these funds are made before admission to College.

Assistance will be withdrawn from students who incur serious College censure, or who fail to maintain a reputable scholarship.

THE MORGAN FUND, bequeathed by the late Henry T. Morgan, of New York City, has been set apart by the Corporation, with the provision that the income shall be divided into scholarships (at present thirty-two in number, yielding \$125 each), to be assigned by the Faculty for the benefit of indigent and deserving students.

THE HARMER FOUNDATION OF SCHOLARSHIPS, the proceeds of a bequest in 1854 from Thomas Harmer Johns (Yale College 1818), of Canandaigua, N. Y., comprises five scholarships, each yielding at least one hundred dollars a year, to be given to deserving students of small means.

THE LYON SCHOLARSHIP FUND, of forty-four hundred dollars, given in 1869-72 by Mr. Morris W. Lyon (Yale College 1846), of New York City, benefits four scholars, selected for their worth and need by the founder or the Faculty.

THE LUCIUS HOTCHKISS FUND, of ten thousand dollars, the bequest of Lucius Hotchkiss, Esq., of New Haven, in 1881, comprises four scholarships, the income of which is given to indigent and deserving students.

THE LEAVENWORTH SCHOLARSHIP FUND, amounting to over eight thousand dollars, was established in 1882 by the late Hon. Elias W. Leavenworth (Yale College 1824), of Syracuse, N. Y., with the primary object of defraying in part the expenses of the education of students of good character and promise, bearing the surname of Leavenworth.

There are nineteen other Scholarship Funds, most of them of one thousand dollars, the income of which may be given to such students as shall be selected by the founders or the Faculty. In this number are included Scholarships named in commemoration of William Allen, Charles Atwater, William S. Charnley, William E. Dodge, Thomas H. and Luther Fuller, Sereno Gaylord, Joel Hawes, Samuel Holmes, Charles L. Ives, Elisha C. Jones, William A. Macy, John S. Mitchell, Peter Parker, Messrs. Raymond and Bordwell, and John Spaulding.

There are also opportunities for students in need of aid to render service to the College as monitors, etc.; in this way about seven hundred dollars is disbursed annually. And in general it may be said that the other means of self-help at the command of students are sufficient to enable many of those who have spare time to provide for the larger part of their College expenses.

By the liberality of Mr. William L. Andrews, of New York City, and as a memorial of his son, Loring W. Andrews, a member of the class of 1883, a well furnished library has been established, containing text-books and works of reference, to be loaned gratuitously to those students who have need to avoid the expense of purchasing such books. Permission to use this library can be obtained from the President.

FELLOWSHIPS AND SCHOLARSHIPS

THE DOUGLAS FELLOWSHIP, with an income of six hundred dollars a year, was founded in 1873, by Mrs. Samuel Miller, of New Haven, and named in memory of her brothers, the Rev. Sutherland Douglas (Y. C. 1822) and George H. Douglas (Y. C. 1828). The incumbent, who must be a recent graduate of this Department, pursuing non-professional studies in New Haven, is elected annually, but no person shall hold the Fellowship for more than three years.

THE SOLDIERS' MEMORIAL FELLOWSHIP, with an annual income of six hundred dollars, was founded in 1875 by Mrs. Theodosia D. Wheeler, of New Haven, in honor of the alumni who fell in battle as Union soldiers, in the war of 1861-1865, and in special remembrance of William Wheeler, of the Class of 1855. The incumbent must be, at the time of his election, a graduate of this Department, of not more than three years' standing. He shall pursue non-professional studies, and may hold the Fellowship for a period not exceeding five years. In selecting the incumbent, the President and Professors are to give preference to one who has shown special proficiency in Greek; and

for the further prosecution of Greek study, the Fellow may be allowed to spend a part or the whole of the time of his incumbency in Athens, in connection with the American School of Classical Studies, instead of in New Haven.

THE SILLIMAN FELLOWSHIP, founded in memory of Professor Benjamin Silliman, Professor of Chemistry, Mineralogy, and Geology in Yale College from 1802 until his death in 1864, has an annual income of six hundred dollars, and is awarded to a graduate of this Department who has given evidence of proficiency and promise in some branch of physical science. The incumbent is elected annually, but no person shall hold the Fellowship for more than three years.

THE BERKELEY SCHOLARSHIP, founded in 1733 by the Rev. George Berkeley, Dean of Derry, and afterwards Bishop of Cloyne, and yielding about fifty-five dollars a year, is awarded to the student in each Senior Class who passes the best examination (which must be a creditable one) in the Greek Testament (Pauline Epistles), the first book of Thucydides, the first six books of Homer's Iliad, Cicero's Tusculan Questions, Tacitus (except the Annals), and Horace; provided he remain in New Haven as a graduate, one, two, or three years.

THE CLARK SCHOLARSHIP, being the income of a fund of two thousand dollars, given for this purpose by Mr. Sheldon Clark, of Oxford, Connecticut, is awarded in each Senior Class to the applicant who has attained the highest rank in the studies of the course; provided he remain in New Haven for one year or two years immediately after graduation, pursuing a course of study (not professional) under the direction of the Faculty.

THE BRISTED SCHOLARSHIP, founded in 1848 by Mr. Charles Astor Bristed (Yale College 1839), of New York City, and yielding about one hundred and twenty-five dollars a year, is awarded, whenever there is a vacancy, to the student in the Sophomore or Junior Class who passes the best examination in the classics and mathematics. The

successful candidate receives the annuity (forfeiting one-third in case of non-residence) until the end of the third year after graduation.

THE FOOTE SCHOLARSHIPS, founded in 1873 by a bequest of Harry W. Foote (Yale College 1866), of New Haven, and yielding five hundred dollars a year, are awarded to graduates of this Department, selected by the Corporation, who remain in New Haven for one or more years pursuing studies in the graduate courses of the Department of Philosophy and the Arts.

THE LARNED SCHOLARSHIP, founded in 1877 by the bequest of Mrs. Irene Larned, of New Haven, and yielding three hundred dollars a year, for three years, is awarded in each Senior Class. The incumbent must reside in New Haven, pursuing a course of advanced study under the direction of the Faculty.

THE MACY SCHOLARSHIP, being the income of a fund of ten thousand dollars, derived from a bequest of the Rev. William A. Macy (Yale College 1844), of Shanghai, China, who died in 1859, is awarded, whenever there may be a vacancy, to a recent graduate of distinguished scholarship, who may hold it for a term of three years. He shall reside in New Haven, pursuing a course of non-professional study, and shall at the close of each College year present a meritorious thesis in evidence of his work during the previous year.

THE WOOLSEY SCHOLARSHIPS, each having the income of a fund of one thousand dollars, the gift of President Woolsey, in 1846-48, are awarded in successive years, one to the student in each Freshman Class, who passes the best examination in Latin Composition (excellence in which is essential to success), in the Greek of the year, and in the solution of algebraic problems. The successful candidate receives the annuity, under certain conditions, during the four years of his College course. The student who stands second at this examination receives for one year the income of the HURLBUT SCHOLARSHIP FUND, of one thousand dollars (established by Henry A. Hurlbut, Esq., of New York City, in 1859); and the student who stands third, the

income for one year of the **THIRD FRESHMAN SCHOLARSHIP FUND**, of the same amount, given by Charles M. Runk, Esq., of Allentown, Pennsylvania, in 1865.

THE **W. W. DEFOREST SCHOLARSHIP**, being the income of a fund of two thousand dollars, bequeathed in 1867 by William Wheeler DeForest, of New York City, is awarded to a student in each Senior Class who has attained distinction in the study of French while in College, provided he pursue for the year after graduation a further course of study in the modern languages, especially French, Spanish, Portuguese, or Italian, under the direction of the Faculty.

PREMIUMS

THE **DEFOREST PRIZE**, founded by David C. DeForest, of New Haven, and consisting of a gold medal, of the value of \$100, is awarded "to that scholar of the Senior Class who shall write and pronounce an English Oration in the best manner," the President and Professors being judges.

TOWNSEND PREMIUMS, five in number, of twelve dollars each, founded in 1843 by the gift of Isaac H. Townsend (Yale College 1822), of New Haven, are awarded in each Senior Class for the best specimens of English Composition; all compositions receiving Premiums must be read in public.

DEFOREST MATHEMATICAL PRIZES, founded by Dr. John DeForest (Yale College 1826) and his son, E. L. DeForest (Yale College 1854), of Watertown, Connecticut.—A first prize of one hundred dollars, and three second prizes of fifty dollars each, are offered to the Senior Class for worthy solutions of problems in pure and applied Mathematics. This year about sixty dollars from the same source will be offered in prizes to the Junior, Sophomore, and Freshman Classes for the solution of mathematical problems.

WINTHROP PRIZES, the income of a fund of \$5000 given in 1871 by Buchanan Winthrop, Esq. (Yale College 1862), of New York City, are annually offered to the Junior Class "for the most thorough acquaintance with the Greek and

Latin poets," particular attention being paid to elegance of scholarship and appreciation of the spirit of the poetry, as shown at an examination during the latter half of the second term. The first prize is two hundred dollars, and the second prize is the balance of the income for the year.

The subjects for the examination in the Class of 1890 are as follows: in Greek, the *Iliad* of Homer, Books I-XII; Euripides, *Iphigenia among the Taurians*, and *Cyclops*; Theocritus, *Idylls* I-IV, VI-XVII; in Latin, Lucretius, Book II; *Bucolics* of Vergil; *Epistles* of Horace, Book II: *Satires* of Juvenal, I, III, IV, V, VII, VIII.

THE HENRY JAMES TENEYCK PRIZES, the income of a fund of twenty-six hundred dollars, established in 1888 by the Kingsley Trust Association in memory of Henry James TenEyck (Yale College 1879), are awarded to the successful competitors at the Junior Exhibition, in the second term of each year. The competition is limited to eight speakers chosen from the higher grades of the Junior appointment list.

COLLEGE PREMIUMS are given each year in the Sophomore Class, for English Composition, and for Declamation.

THE SCOTT PRIZE for excellence in German is offered to the Senior Class, and the SCOTT PRIZE for excellence in French to the Junior Class; these are of the value of thirty dollars each, and are given in books, appropriately inscribed. The prizes were founded by the bequest of Henry W. Scott (Yale College 1863), of Philadelphia, who died in 1871.

THE LUCIUS F. ROBINSON LATIN PRIZES, from the income of a fund given in 1887 by the daughters of the late Lucius F. Robinson (Yale College 1843), of Hartford, will be awarded the present year to students showing special proficiency in Latin:—one series of prizes (of fifty, thirty, and twenty dollars, respectively) being open to members of the Senior and Junior Classes who have taken three hours per week in Latin electives; and a second series, of the same amounts, to members of the Sophomore Class.

BERKELEY PREMIUMS for excellence in Latin Composition are offered to the Freshman Class near the end of the year, from the surplus income of the Berkeley Scholarship Fund.

THE HUGH CHAMBERLAIN GREEK PRIZE, being the income of one thousand dollars given for this purpose in 1886, by the Hon. Daniel H. Chamberlain (Yale College 1862), of New York City, is awarded annually to that member of the Freshman Class who has passed the best examination in the Greek required for admission to College.

Candidates for this Prize will be required to pass the whole examination in Greek, the year of their admission to College, even though they may have been accepted already in some of the Greek subjects at a preliminary examination.

DEGREES

The degree of BACHELOR OF ARTS is conferred by the Corporation on those persons who have completed the course of academical exercises, as appointed by law, and have been approved on examination at the end of the course as candidates for the same. Candidates are required to pay their dues to the Treasurer as early as the Saturday before Commencement.

For the degrees of Master of Arts and Doctor of Philosophy, see page 101.

SHEFFIELD SCIENTIFIC SCHOOL

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FELIX KLEEGER, PH.B., *Assistant in Analytical Chemistry*
PERCY F. SMITH, PH.B., *Instructor in Mathematics*

THE SHEFFIELD SCIENTIFIC SCHOOL is devoted to instruction and researches in the mathematical, physical, and natural sciences, with reference to the promotion and diffusion of science, and also to the preparation of young men for such pursuits as require special proficiency in these departments of learning. Instruction is also given in French, German, English, History, Political Economy, and Constitutional Law.

The school, begun in 1847, and reorganized upon a more extensive scale in 1860, received in 1863, by the act of the Connecticut Legislature, the national grant for the promotion of scientific education under the Congressional enactment of July, 1862.

The name was conferred upon it by the Corporation of the University as a recognition of the late Joseph E. Sheffield, Esq., whose gifts to it at various times constitute its chief property and endowment.

OFFICERS AND INSTRUCTORS—Upon the Governing Board, consisting of the professors permanently attached to the School, devolve its internal management and the greater part of the instruction. In addition to these and the instructors employed during the current year, Professor Niemeyer, of the Yale School of the Fine Arts, gives instruction in Elementary and Free-hand Drawing.

THE BOARD OF STATE VISITORS consists of the Governor, and Lieutenant Governor, three Senior Senators, and the Secretary of the Board of Education.

The instruction is intended for two classes of students:—

I.—Graduates of this and other Colleges or Universities, and other persons qualified for advanced or special study.

II.—Undergraduates who desire a training, chiefly mathematical and scientific, in part linguistic and literary, for higher scientific studies, or for other occupations to which such training is suited.

INSTRUCTION FOR GRADUATE AND SPECIAL STUDENTS

Persons who have gone through undergraduate courses of study, here or elsewhere, may avail themselves of the

facilities of the School for more special professional training in the physical sciences and their applications, gaining in one, two, or three years the degree of BACHELOR OF PHILOSOPHY, or in two additional years of Engineering study, that of CIVIL ENGINEER or that of DYNAMIC or MECHANICAL ENGINEER.

Or, engaging in studies of a less exclusively technical character, they may become candidates for the degree of DOCTOR OF PHILOSOPHY, under the conditions stated on page 101. The instruction in such cases will be adapted to the particular needs and capacities of each student, and may be combined with that given by instructors in other departments.

SPECIAL STUDENTS—For the benefit of those who, being fully qualified, desire to pursue particular studies without reference to obtaining a degree, special or irregular students are received in most of the departments of the School; not, however, in the Select Course, nor in the Freshman Class. It should be distinctly understood that these opportunities are not offered to persons who are incompetent to go on with regular courses, but are designed to aid those who have received a sufficient preliminary education elsewhere to increase their proficiency in special branches.

INSTRUCTION FOR UNDERGRADUATE STUDENTS

TERMS OF ADMISSION—Candidates must be not less than fifteen years of age, and must bring satisfactory testimonials of moral character from their former instructors or other responsible persons.

For admission to the Freshman Class the student must pass a thorough examination in the following subjects:

English—including grammar, spelling, and composition. In grammar,

Whitney's *Essentials of English Grammar*, or an equivalent.

History of the United States.

Geography.

Latin—(1) Simple exercises in translating English into Latin. (Smith's "*Principia Latina*," Part i, is named as indicating the nature and extent of this requirement, and an acquaintance with it will be required

unless a satisfactory substitute is offered.) (2) Caesar—six books of the Gallic War, or their equivalent. (As advantageous substitutes for the last three books of Caesar may be suggested three books of Vergil's Aeneid, or a similar amount of Ovid.)

Arithmetic—Fundamental Operations, Least Common Multiple, Greatest Common Divisor, Common and Decimal Fractions, Denominate Numbers, including the Metric System of Weights and Measures; Percentages, including Interest, Discount, and Commission; Proportion, Extraction of the Square and Cube Roots.

Algebra—Fundamental Operations, Fractions, Equations of the First Degree, with one or several unknown quantities; Inequalities, Ratio and Proportion, Powers and Roots, including the theory of Exponents, the Binomial Formula for an Entire Exponent, and the Transformation and Reduction of Radicals; Equations of the Second Degree, Progressions, Continued Fractions, Permutations and Combinations, the Doctrine of Limits, the Nature of Series, the Method of Indeterminate Coefficients, Fundamental Properties of Logarithms, Compound Interest and Annuities.

Geometry—Plane, Solid, and Spherical; including fundamental notions of Symmetry, and examples of Loci and Maxima and Minima of Plane Figures,—so much, for example, as is contained in Newcomb's Geometry, exclusive of the chapters on the Ellipse, Hyperbola, and Parabola.

Trigonometry—including the Analytical Theory of the Trigonometrical Functions, and the usual formulae; the Construction and Use of Trigonometrical Tables; and the Solution of Plane Triangles;—so much, for example, as is contained in the first six chapters of Newcomb's larger Trigonometry and in Arts. 75-78 of chapter viii, with the explanation of the first five tables in Newcomb's Five-figure Logarithmic and Trigonometric Tables, which are furnished at the examinations in New Haven.

While no entrance examination is held in the *History of England*, candidates for admission are urgently advised to make themselves as familiar as possible with that subject, as a knowledge of it is essential to the most successful prosecution of some of the studies of the course.

Candidates will be allowed the option of passing on the above-named subjects in two successive years. In such cases they must present themselves for examination at the June examination of the first year in the following subjects or parts of subjects: *History of the United States, Geography, Arithmetic, Plane Geometry, and Algebra to Quadratic Equations.*

In order to have this preliminary examination counted, candidates must pass satisfactorily on four of the subjects;

and notice of the intention to divide the examination must be given to Professor George J. Brush, Director of the School, on or before June 15.

In his preparation in GEOMETRY the candidate should, as far as practicable, have suitable exercises in proving simple theorems and in solving simple problems for himself. It is important, too, that he should be accustomed to the numerical application of geometric principles, and especially to the prompt recollection and use of the elementary formulae of mensuration. In TRIGONOMETRY he should be exercised in applying the usual formulae to a variety of simple reductions and transformations, including the solution of trigonometrical equations. Readiness and accuracy in trigonometrical calculations are also of prime importance to the candidate. If the use of logarithms is postponed in his preparation till Trigonometry is taken up (which is by no means necessary or advisable), he should then have abundant applications of them to all forms of calculation occurring in ordinary practice, as well as to those appearing in the solution of triangles. Finally, in all his calculations, he should study the art of neat and orderly arrangement.

In LATIN the student should have such continued training in parsing as shall make him thoroughly familiar with declensions and conjugations, and with the leading principles of syntax. To secure these results more effectually, the requirement has been adopted of simple exercises in translating English into Latin. As this course of exercises is designed solely as a preparation for reading, it should be begun at the earliest stage of Latin study. A very large proportion of the deficiencies in the Latin examination for several years past has been due to the neglect of the suggestions of this paragraph, and to the attempt to read a Latin author with totally inadequate grammatical preparation.

The examinations for admission in 1889 take place at North Sheffield Hall, on Thursday, Friday, and Saturday, June 27, 28, 29 (beginning at 9 A. M. on Thursday); and on Tuesday and Wednesday, September 17, 18 (beginning at 9 A. M. on Tuesday).

In general, examinations for admission to the Freshman Class of the *next* year can be held only in June and September as specified; if in any case sufficient reason exists for an exception to this rule, a special fee (not exceeding fifty dollars) will be charged.

In 1889 examinations (for the Freshman Class only) will

also be held in Exeter, N. H., in Andover, Mass., in New York City, in Chicago, in Cincinnati, and in San Francisco (beginning on Thursday, June 27, at 9 A. M.), at places to be announced in local newspapers of the day previous. Candidates who propose to be present are requested to send their names to Professor George J. Brush, Director of the School, before June 15. A fee of five dollars will be charged for admission to the examinations outside of New Haven.

Candidates for advanced standing in the undergraduate classes are examined, in addition to their preparatory studies, in those already pursued by the class which they wish to enter. No one can be admitted as a candidate for a degree, later than at the beginning of the Senior year.

COURSES OF INSTRUCTION, occupying three years, are arranged to suit the requirements of various classes of students. The first year's work is the same for all; for the last two years the instruction is chiefly arranged in special Courses. The Special Courses most distinctly marked out are the following:

- (a.) In Chemistry ; (b.) In Civil Engineering ;
- (c.) In Mechanical Engineering ;
- (d.) In Agriculture ; (e.) In Natural History ;
- (f.) In Biology preparatory to Medical studies ;
- (g.) In studies preparatory to Mining and Metallurgy ;
- (h.) In select studies preparatory to other higher studies.

The arrangement of studies is indicated in the annexed scheme. A fuller statement of the methods and character of the instruction will be found below, p. 83. Unless otherwise specified, the number of hours given means hours per week.

FRESHMAN YEAR: INTRODUCTORY TO ALL THE COURSES

FIRST TERM:—*German*—Whitney's Grammar and Reader, 3 hrs. *English*—Lounsbury's History of the English Language, 1 hr.; Exercises in composition. *Mathematics*—The Derivatives of Algebraic Functions; Fundamental Properties of Equations; Plane Analytical

Geometry; 3 hrs. *Physics*—Recitations, 2 hrs., with experimental lectures, 2 hrs. *Chemistry*—Recitations, 2 hrs.; laboratory practice, 2 hrs. *Elementary Drawing*—Practical Lessons in the Art School, 3 hrs.

SECOND TERM :—*Language, Physics, and Chemistry*—as stated above. *Mathematics*—Plane Analytical Geometry, continued, 3 hrs. *Physical Geography*—8 Lectures during the term. *Botany*—Gray's Lessons, 3 hrs. *Drawing*—Principles of Orthographic Projection; Isometric Drawing with application to drawing from models and structures, and isometric construction of objects from their orthographic projections; Projections of Shadows; Shading and tinting; Sections; Developments and Intersections of Surfaces; 4 hrs.

For the Junior and Senior years, the students select for themselves one of the following Courses :

(a.) IN CHEMISTRY :

JUNIOR YEAR :

FIRST TERM :—*Organic Chemistry*—Lectures and Recitations, 2 hrs. *Qualitative Analysis*—Recitations, 2 hrs.; Laboratory Practice, 20 hrs.; Blowpipe Practice and Determinative Mineralogy, 4 hrs. *German*—3 hrs. *French*—3 hrs.

SECOND TERM :—*Organic Chemistry*—Lectures and Recitations, 2 hrs. *Quantitative Analysis*—Laboratory Practice, 20 hrs.; Recitations, 2 hrs. *Mineralogy*—Blowpipe Analysis and determination of species, 4 hrs.; Lectures in Crystallography and Descriptive Mineralogy, 2 hrs. *French*—3 hrs. *German*—3 hrs.

SENIOR YEAR :

FIRST TERM :—*Organic and Theoretical Chemistry*—Recitations and Lectures, 2 hrs. *Agricultural Chemistry*—Recitations (optional), 2 hrs. *Quantitative Analysis*—continued six weeks, 20 hrs. *Organic Chemistry*—Experimental work during the remainder of the term, 20 hrs. *Geology*—Dana's; Recitations, 3 hrs. *Zoology*—Lectures, 2 hrs. *French*—3 hrs.

SECOND TERM :—*Theoretical Chemistry*—continued, 2 hrs. *Zoology*—continued, 2 hrs. *Agricultural Chemistry*—(optional), 2 hrs. *Analytical Chemistry*—Analysis of Minerals and Technical Products, 20 hrs. *Assaying*—(optional). *Metallurgy*—Lectures (optional). *Geology*—Dana's, 3 hrs. *Mineralogy*—(optional). *French*—3 hrs., during Winter half-term.

The Laboratory Practice of the second term of the Senior Year may be devoted to such special branches of Analytical or Organic Chemistry as the student may desire, or to original investigations in connection with theses.

(b.) IN CIVIL ENGINEERING:

JUNIOR YEAR:

FIRST TERM:—*Mathematics*—Analytical Geometry of Three Dimensions; Elements of the Theory of Functions; Differential Calculus, with applications to Geometry and Analysis; solution of Numerical Equations; 6 hrs. *Surveying*—Field work, 16 hrs. till November. *Drawing*—Descriptive Geometry, 6 hrs. from November. *German*—3 hrs. *French*—3 hrs.

SECOND TERM:—*Mathematics*—Integral Calculus with applications to Geometry; Rational Mechanics; 6 hrs. *Drawing*—Descriptive Geometry, concluded; Topographical; Practice in working drawings; 6 hrs. *Surveying*—Topographical and Rail Road curves, 16 hrs. *German*—3 hrs. *French*—3 hrs.

SENIOR YEAR:

FIRST TERM:—*Field Engineering*—Location of line of Railroad, setting out slope stakes, calculation of earth work; Lectures on economic location; Office work; Henck's Field Book; 20 hrs. till November. *Civil Engineering*—Mechanics applied to Engineering; Resistance of Materials; Bridges and Roofs; Stone Cutting with Graphical Problems; 8 hrs. *Geology*—Dana's, 3 hrs. *Mineralogy*—Blowpipe Analysis and Determinative Mineralogy, 4 hrs. *French*—3 hrs.

SECOND TERM:—*Civil Engineering*—Bridges and Roofs; Building Materials; Stability of Arches and Walls; Foundations; 6 hrs. *Dynamics*—Principles of Mechanism; Thermodynamics; Steam Engine; 6 hrs. *Hydraulics*—Hydraulics and Hydraulic Motors, 3 hrs. *Drawing*—Designing; Practical Problems; Specifications and Estimates; 12 hrs. *Spherical Trigonometry and Astronomy*—Practical Astronomy, with field work, 6 hrs. *Mineralogy*—continued during Winter half-term, 4 hrs. *Geology*—3 hrs. *French*—3 hrs. during Winter half-term.

(c.) IN MECHANICAL ENGINEERING:

JUNIOR YEAR:

FIRST TERM:—*Mathematics*—Analytical Geometry of Three Dimensions; Elements of the Theory of Functions; Differential Calculus, with applications to Geometry and Analysis; Solution of Numerical Equations; 6 hrs. *Surveying*—Theory and Practice; 3 hrs. until November 1st. *Principles of Mechanism*—Kinematics, 1 hr. *Shop Visiting*—Study of Machine Details and Tools; 3 hrs., beginning when Surveying ends. *Drawing*—Descriptive Geometry, 3 hrs. *German*—3 hrs. *French*—3 hrs.

SECOND TERM:—*Mathematics*—Integral Calculus, with applications to Geometry; Rational Mechanics; 6 hrs. *Principles of Mechanism*—

Applied Kinematics; Forms of Teeth of Wheels; Cams; Parallel Motions; Transmission of Power by Belts and Gearing, etc.; 1 hr. until Spring recess, then 2 hrs. *Shop Visiting*—continued, 3 hrs., until Spring recess. *Study of the Steam Engine*—2 hrs. after Spring recess. *Drawing*—Perspective and Shadows; Machine Elements; 3 hrs. *German*—3 hrs. *French*—3 hrs.

SENIOR YEAR:

FIRST TERM:—*Applied Mechanics*—Friction; Moment of Inertia; Centrifugal Force; Elasticity and Strength of Materials; Theory of Flexure and Torsion; Strains in Structures; Construction of Roofs and Bridges; Equilibrium and Pressure of Fluids; Theory of Flotation; Flow of Fluids in Pipes and Channels; Resistance of Ships; 9 hrs. *Machine Designing*—Practical Exercises in Designing Machine Details and Simple Machines, 12 hrs. *Study of the Steam Engine*—continued, 2 hrs. *Electricity* (optional)—Laboratory work, 3 hrs. *Visits of Inspection*—Examination of Machinery in operation; Reports of Visits. *French*—3 hrs.

SECOND TERM:—*Applied Mechanics*—continued; Hydrodynamics; Theory of Water-Wheels and Turbines; 6 hrs. *Thermodynamics*—3 hrs. *Study of the Steam Boiler*—2 hrs. *Electricity* (optional)—Laboratory work, 3 hrs.; Lectures, 2 hrs. *Machine Designing*—continued; advanced exercises in Preparing Designs and Working Drawings for Machinery; Estimates of Weight and Cost of Machinery; 12 hrs. *French*—3 hrs. during Winter half-term. *Thesis. Visits of inspection and Reports.*

(d.) IN AGRICULTURE:

JUNIOR YEAR:

The course is identical with that in Chemistry, except that in the second term lectures in Crystallography and Descriptive Mineralogy are omitted, and in the Spring half-term Botany is substituted for Determinative Mineralogy.

SENIOR YEAR:

FIRST TERM:—*Agriculture*—Recitations, 2 hrs. *Agricultural Chemistry*—Recitations, 2 hrs. *Geology*—Recitations, 3 hrs. *Zoology*—Lectures, 2 hrs. *Meteorology*—Lectures, 2 hrs. *Botany*—Laboratory Practice, 5 hrs. *English*—Recitations, 2 hrs. *French*—Recitations, 3 hrs.

SECOND TERM:—*Agriculture*—Recitations or Lectures, 2 hrs. *Agricultural Chemistry*—Recitations, 2 hrs. *Physiology*—Recitations or Lectures, 2 hrs. *Geology*—Recitations, 3 hrs. *Zoology*—continued, 2 hrs. *English*—Recitations, 3 hrs. *Heredity and Stock-Breeding*—Lectures, 2 hrs. during Winter half-term. *Sanitary Science and Public Health*—Lectures, 2 hrs. during Spring half-term. *French*—3 hrs. during Winter half-term.

(e.) IN NATURAL HISTORY:

Either Mineralogy, Zoology, or Botany, may be made the principal laboratory study, some attention in each case being directed to the other branches of Natural History.

JUNIOR YEAR:

FIRST TERM:—*Organic Chemistry*—Lectures and Recitations. *Qualitative Analysis*—Fresenius's; Laboratory Practice; Recitations. *Mineralogy*—Blowpipe Analysis and Determinative Mineralogy, 4 hrs. *Botany*—Gray's Manual, 3 hrs.; Laboratory Practice, 3 hrs. *German*—3 hrs. *French*—3 hrs.

SECOND TERM:—*Zoology*—Laboratory Practice, 6 to 12 hrs.; Recitations; Excursions (land and marine). *Botany*—Lectures; Laboratory Practice in the identification of Phaenogamous Plants, 2 hrs. *Physiology*—Huxley's. *Embryology*—Lectures. *Mineralogy*—Blowpipe Analysis and Determinative Mineralogy, 4 hrs. Lectures in Crystallography and Descriptive Mineralogy, 2 hrs. *Physical Geography*. *German*—3 hrs. *French*—3 hrs.

SENIOR YEAR:

FIRST TERM:—*Geology*—Dana's, 3 hrs.; Excursions. *Zoology*—Laboratory Practice, 8 to 12 hrs.; Lectures, 2 hrs.; Recitations, 2 hrs.; Excursions. *Botany*—Laboratory Practice in the Preparation and Examination of Microscopical Specimens, illustrative of Stem-structure and of the Anatomy of the higher Cryptogamous Plants, 5 hrs.; Excursions. *Meteorology*—Lectures, 2 hrs. *French*—3 hrs.

SECOND TERM:—*Geology*—Dana's, 3 hrs. *Anatomy of Vertebrates*—Huxley's, 2 hrs. *Zoology*—Laboratory Practice, 8 to 12 hrs.; Recitations, 2 hrs.; Lectures, 2 hrs. *Botany*—Herbarium Studies, especially in the Cryptogamous Orders; Botanical Literature; Essays in Descriptive Botany. *Sanitary Science, Laws of Heredity, and Principles of Breeding*—Lectures. *French*—3 hrs. during Winter half-term.

Besides the regular course of recitations and lectures on structural and systematic Zoology and Botany, and on special subjects, students are taught in the laboratories to prepare, arrange, and identify collections, to make dissections, to pursue investigations, and when sufficiently advanced, to describe genera and species in the language of science. For these purposes, large collections in Zoology belonging to the College are available, as are also the private botanical collections of Professor Eaton.

(f.) IN BIOLOGY PREPARATORY TO MEDICAL STUDIES:

JUNIOR YEAR:

FIRST TERM:—*Organic Chemistry*—Lectures and Recitations, 2 hrs. *Qualitative Analysis*—Fresenius's; Laboratory Practice, 20 hrs.; Recitations, 2 hrs. *Mineralogy*—Blowpipe Analysis and Determinative Mineralogy, 4 hrs. *German*—3 hrs. *French*—3 hrs.

SECOND TERM:—*Anatomy and Histology*—Laboratory Practice, 18 hrs.; Lectures and Recitations, 1 hr. *Physiology*—Huxley's; Recitations, 2 hrs. *Embryology*—8 Lectures during the term. *Organic Chemistry*—continued, 2 hrs. *Mineralogy*—continued through Winter half-term, 4 hrs. *Botany*—Lectures; Laboratory Practice in the identification of Phaenogamous plants, 5 hrs. during Spring half-term; Excursions. *German*—3 hrs. *French*—3 hrs.

SENIOR YEAR:

FIRST TERM:—*Physiological Chemistry*—Recitations and Lectures, 3 hrs.; Laboratory Practice, 13 hrs. *Organic and Theoretical Chemistry*—Lectures and Recitations, 2 hrs. *Zoology*—Lectures, 2 hrs. *Botany*—Laboratory Practice in the Preparation and Examination of Microscopical Specimens, illustrative of Stem-structure, and of the Anatomy of the higher Cryptogamous Plants, 5 hrs. *Geology*—Dana's, 3 hrs. *French*—3 hrs.

SECOND TERM:—*Physiological Chemistry and Experimental Toxicology*—Illustrative Lectures, Recitations, and Laboratory Practice, 27 hrs. *Geology*—Dana's, 3 hrs. *Zoology*—continued, 2 hrs. *Sanitary Science*—Lectures, 2 hrs. during Spring half-term. *Laws of Heredity and Principles of Breeding*—Lectures, 2 hrs. during Winter half-term. *French*—3 hrs. during Winter half-term.

(g.) IN STUDIES PREPARATORY TO MINING AND METALLURGY:

Young men desiring to become Mining Engineers can pursue the regular Course in Civil or Mechanical Engineering, and at its close can spend a fourth year in the study of Metallurgical Chemistry, Mineralogy, etc.

(h.) IN THE SELECT STUDIES PREPARATORY TO OTHER HIGHER STUDIES:

JUNIOR YEAR:

FIRST TERM:—*Mineralogy*—Blowpipe Analysis and Determinative Mineralogy, 8 hrs. *Astronomy*—Recitations, 4 hrs. *English*—Early English, 2 hrs. *History*—Green's Short History of the English People, 2 hrs. *French*—3 hrs. *German*—3 hrs.

SECOND TERM:—*Mineralogy*—Lectures ; Laboratory work, 8 hrs. during Winter half-term. *Botany*—Lectures ; Laboratory Practice in the identification of Phaenogamous Plants, 2 hrs. during Spring half-term. *Physical Geography*—4 hrs. during Winter half-term ; Recitations from Guyot and Lectures. *English*—Chaucer, Bacon, Shakspeare, 2 hrs. during Winter half-term, 3 hrs. during Spring half-term. *History*—Green's History, continued, 2 hrs. during Winter half-term, 4 hrs. during Spring half-term. *German*—3 hrs. *French*—3 hrs.

SENIOR YEAR :

FIRST TERM:—*Geology*—Recitations, 3 hrs. ; Excursions. *Zoology*—Lectures, 2 hrs. *English*—Shakspeare, 2 hrs. *Meteorology*—Lectures, 2 hrs. *Constitutional Law*—4 hrs. *French*—3 hrs.

SECOND TERM:—*Geology*—continued, 3 hrs. *Zoology*—continued, 2 hrs. during Winter half-term. *Meteorology*—Lectures, 2 hrs. during Winter half-term. *Sanitary Science*—Lectures, 2 hrs. during Winter half-term. *Political Economy*—Recitations, Exercises, and Lectures, 4 hrs. *English*—Shakspeare, Milton, Dryden, Pope, Gray, and later authors, 3 hrs. *French*—3 hrs. during Winter half-term.

Exercises in English Composition are required during the entire course from all the students. The preparation of graduating theses is among the duties of the Senior year.

Lectures on Military Science and Tactics are annually given by officers of the United States Army.

The following account of the various subjects specified in the above scheme will explain the character and aim of the instruction.

ELEMENTARY CHEMISTRY—The exercises in Elementary Chemistry consist in recitations from a text-book, and experiments by the students in the laboratory to illustrate statements in the book. The object of the laboratory work is to facilitate the study of the subject, and to train the students in manipulation and in the observation of chemical phenomena. Notes are required and students are questioned on the experiments. As the class is divided according to scholarship in Chemistry and Physics, opportunity is given to those who are most proficient to make rapid progress.

ANALYTICAL CHEMISTRY—*Qualitative and Quantitative*—This study is intended to serve two purposes. Analytical Chemistry is used by the

advanced student as a means of investigation in scientific or technical researches. The beginner, however, derives from its study advantages of another kind. The knowledge of the properties of chemical compounds, the familiarity with chemical reactions gained by experience in the laboratory, and the development of the reasoning faculties by the application of this knowledge in analytical processes, enable the student to generalize and classify chemical phenomena and aid him to understand the more abstract theories of chemical philosophy. The method of instruction adopted is conformed to this view of the uses of the study. Text-books are used and recitations are required, but the more important part of both study and instruction is performed in the laboratory. In order to solve the problems which are there constantly presented, the student, aided by books and instructors, must learn both principles and their applications. The student, throughout his course in Analytical Chemistry, spends four consecutive hours in laboratory work during five days of the week. The laboratory, however, is kept open seven hours daily for the benefit of graduate students and others who desire to devote more time to this study.

Qualitative Analysis forms a part of the courses in Chemistry, Biology, Agriculture, and Natural History. Quantitative Analysis is one of the more important studies of the Senior year in the Chemical Course. It is also included to some extent in the Agricultural Course.

ORGANIC CHEMISTRY is taught by informal lectures and experimental illustrations as well as by text-book drill, a lesson from Richter's Organic Chemistry being given out for each instruction-hour. The class has two exercises weekly throughout three terms. The course is adapted to give a fairly complete outline of the subject and some familiarity with the more important bodies and classes of bodies.

In addition to this, the Senior students in the Chemical Course are required to spend 20 hours per week during the latter half of the first term in experimental work in Organic Chemistry. This is intended to supplement the preceding course and at the same time to serve as a preliminary training for such students as desire to make a special study of Organic Chemistry.

Opportunity is also afforded for the carrying on of original investigations in this subject, either in connection with theses or as a part of the regular work in the case of advanced students.

PHYSIOLOGICAL CHEMISTRY and EXPERIMENTAL TOXICOLOGY—Physiological Chemistry is taught by laboratory exercises, illustrative lectures, and recitations. Each student is provided with a suitable working place in the laboratory, well equipped with all needed apparatus and material. The regular course of work, designed especially for Senior students in the Biological Course, extends throughout one year and embraces a thorough study of the chemical composition of the various

tissues and fluids of the body, together with a study of the chemical and physiological processes of respiration, digestion, secretion, excretion, and nutrition in general.

Beginning with a study of the albuminous bodies, the experimental work extends through the epithelial, connective, contractile, and nerve tissues. Proceeding then to digestion, the various digestive fluids are studied, artificial digestions are made, and the several products of digestive action isolated and studied. The blood and urine are next considered, and students are taught to make both qualitative and quantitative analyses of the latter and to identify abnormal constituents. A portion of one term is also devoted to a study of the chemical reactions of the more important mineral and organic poisons, and their physiological action is determined experimentally. Students are also taught how to separate poisons from organic tissues and fluids, and to identify them, both by chemical and physiological reaction. During the latter half of the second term, Senior year, opportunity is afforded for the carrying on of original investigations on some selected subject in either physiological chemistry or toxicology, in connection with the preparation of graduating theses. The course of work is particularly recommended to students intending to enter upon a course of medical studies.

ANATOMY AND ELEMENTARY PHYSIOLOGY—The object sought in the instruction in Anatomy and Physiology, as taught during Junior year, is the manual and mental training of the student in the methods of investigation by which the facts and principles of these sciences have been established, and at the same time to give him a sufficient knowledge of their elements to enable him to pursue with profit the special studies of the Biological Course as a preparation for medical studies. With this end in view, five forenoons each week are given to laboratory work in Anatomy and Histology. The student, under the immediate supervision of the instructor, dissects specimens of a number of different animals, and is required to make careful sketches and records of his work; he also examines the different animal tissues with the microscope, makes microscopical preparations, and is taught the methods of anatomical and histological investigation. This work is reviewed each week by means of text-book and recitation, or by lecture and examination. The elements of Human Physiology are taught by text-book, recitations, and demonstrations. The physiology of digestion and nutrition is taught during Senior year in connection with Physiological Chemistry. During the last part of the term there is a short course of lectures on Embryology with special reference to Human Morphology.

GEOLOGY—The course in Geology includes recitations and oral instruction, extending through the entire year on alternate mornings. During the first half-year, the recitations are attended by the entire

Senior Class, except those in the course in Mechanical Engineering. This part of the course includes Physical, Lithological and Dynamical Geology. These subjects are illustrated by diagrams and specimens. During the first term, each student is required to make a collection containing a specified number of the most important rocks and minerals, and to pass a thorough examination upon them at the end of the term; the object is to compel every student to become personally familiar with the appearance, as well as with the composition and other characters, of the rocks and minerals that are of most importance in Geology, as well as in the arts.

The last half of the year is devoted to Historical Geology and Palaeontology. This part of the course is pursued by all the Seniors except those in the courses in Mechanical and Civil Engineering. Suitable collections of fossils are used to illustrate the subject.

Opportunities are afforded for optional geological excursions during the warmer months.

MINERALOGY—The instruction in Mineralogy is carried on by means of practical work in a laboratory especially fitted up for the purpose, and is intended to familiarize the student with the common minerals, attention being devoted especially to those which are of economic, geological, or scientific importance. To understand better the chemistry of the subject, the student is first made familiar with the simple chemical and blowpipe reactions useful in testing minerals, and applies this knowledge later to the determination of unknown species. The students have access to a labeled collection where they can study the properties of the minerals and make comparisons, and also to extensive unlabeled collections, arranged especially to give them practice and facility in the correct identification of minerals. In addition to the laboratory work, instruction is given in Crystallography, illustrated by a collection of models and natural crystals. The lectures in Descriptive Mineralogy to the more advanced students are illustrated by means of the extensive private collection of Professor Brush. The laboratory is provided with apparatus for the thorough chemical or physical investigation of minerals and with an extensive library to which the students have access. The laboratory is open seven hours each day to accommodate any who desire to devote more time and attention to the subject than is laid out in any of the prescribed courses.

ZOOLOGY—The instruction in Zoology includes a course of lectures on Systematic Zoology, Morphology, and Embryology, which are attended by all the Seniors except those in the courses in Mechanical and Civil Engineering. These lectures are generally given twice a week, and continue during about half the year. The students are required to keep careful notes of the lectures.

Students in the Natural History Course are also required to pursue a course of laboratory instruction during the second term of the Junior and all of the Senior year. This generally occupies from two to four hours a day on four days of each week. It includes dissections of various classes and orders of animals, with microscopic studies of the finer structures and of minute animal forms, as well as work in systematic Zoology.

Special courses of recitations or lectures on particular subjects are also given when desirable.

BOTANY—The scheme of instruction provides for three successive courses of study, as either ending the study for the ordinary student, or introducing it for one who desires to become a professional botanist.

The first or elementary course, which is required of all the Freshmen, is designed to teach the nature of the visible organs of flowering plants, tracing the life-history of vegetation from seed, through stem and root, leaves, branches, buds, blossoms and fruit, to seed again. The method consists mainly in the use of some easy text-book, like Gray's Lessons, with whatever illustrations and explanations may be needed to secure the student's attention. The second course, coming the next year, is restricted to the sections in Biology, Natural History, Agriculture, and Selected studies, and is intended to enable the student to recognize the chief natural orders of native plants, with the ability to identify the common species. The class meets two or three times a week in spring and summer, and is practiced in identifying plants, using Gray's Manual as a standard, and employing the ordinary simple dissecting microscope. At this point the instruction for the Select Course ceases; in the next fall term the work for the Courses in Biology, Natural History, and Agriculture is entirely practical, books being used only for reference. Students begin with cutting thin sections of some common woody and herbaceous stems, and are shown how to prepare such sections for examination and for permanent preservation as microscopic objects. After acquiring some facility in microscopic manipulation, various parts of flowering plants are brought in for dissection and examination, and towards the close of the term some attention is given to Ferns, Mosses, and Algae. This finishes the course for ordinary students; for those who may desire to prosecute the science professionally, the work is arranged to suit individual requirement, whether it be in the direction of Histology, or of Systematic Botany as applied to flowering plants, or to Ferns, Mosses, Hepatics, or Algae.

AGRICULTURE—The special instruction in the science of Agriculture is by recitations and lectures, with such aids and appliances as are suited to the class-room. Besides Agricultural Chemistry, it includes a discussion of the cultivation of the staple field crops of the country; a production of live stock; theories of rural economy and systems of husbandry; the laws of heredity and principles of stock-breeding.

SANITARY SCIENCE—The lectures on this subject discuss the natural laws which govern the public health ; their relation to the social habits and condition of communities ; instruction in the use of mortuary statistics ; epidemics and pestilences, with their relations to the prosperity of a community, and methods of control ; the germ theory of disease and theory of disinfectants ; the hygiene of private dwellings and public buildings ; the relations of public health to water supply and to sanitary engineering ; legislation relating to the public health and the methods of official sanitary administration.

MATHEMATICS—The Mathematical studies of the Freshman Year are pursued by all members of the class ; those of the Junior Year by students in the course of Engineering and properly qualified Special Students who may choose them. During the latter year, in connection with the instruction briefly indicated in the scheme above [p. 79], a course of familiar lectures is given to supplement the ordinary classroom exercises.

PHYSICS—The object of the experimental lectures is not only to elucidate the subjects treated in the text-book employed, but also to extend the treatment of such subjects, and to introduce others where thought desirable. A considerable portion of the work of the year is the preparation for recitation on matter thus presented.

At the end of November, the Freshman class is redivided into three sections, according to capacity shown in the subjects of Chemistry and Physics. After this, although the experimental lectures will be attended as before by the class as a whole, the higher divisions will be able to pursue the studies more thoroughly.

The facilities of the Physical Laboratory will be extended to such graduate students and Seniors as may desire them.

Course in Advanced Physics—A course of two lectures per week, beginning in January, is supplemented by laboratory work. The earlier portion of the time is devoted to the theory of observation and the method of least squares. The course is optional to all who have a command of the calculus.

CIVIL ENGINEERING—The object of this course is to give a thorough preparation, first of all, in the principles of the various sciences involved, and afterwards, as extensive practice in the application of these principles as the time at disposal, the ability of the students, and the facilities and plant permit.

Under the first head are included such subjects as Mathematics, Physics, Mechanics, Thermodynamics, Astronomy, Geology, Mineralogy, Chemistry, and Botany ; and under the second head, Drawing, Surveying, Strength and Properties of Materials, and Design and Construction of various kinds, such as Bridges, Roofs, Foundations, Arches, Retain-

ing Walls, Dams, Water Works, Railroads, Improvement of Rivers and Harbors, Sewerage and Drainage, Water Motors, etc.

The first division includes Civil Engineering as a Science, the other Civil Engineering as an Art. The ground covered by the first is definite, and the instruction is made as thorough as possible. The ground covered by the second is of almost indefinite extent. Here, by a careful selection of practical examples, such as occur in engineering practice, the application of principles is illustrated, and together with the analytical or algebraic methods, the student is also instructed in practical graphic solutions, wherever such solutions present a special value. Much time is devoted to geodetic operations and to surveying in the field. Instruction is given in the practical operations connected with the reconnaissance, location, and surveys of roads, canals, and railroads, such as setting out, cross-sectioning, setting grade stakes, calculation of earth work, etc. Thorough instruction is given in drawing and design, the construction of working drawings, and principles of designing as applied to bridges, roofs, etc.

The instruction is by means of practical exercises, lectures, and recitations, so combined as to develop so far as possible the mental powers of the student. Visits of inspection are made at suitable intervals to private and public works of engineering interest.

The entire course requires five years, three years of undergraduate and two of graduate instruction; and a Thesis of merit upon some approved subject, accompanied by designs and estimates, is required upon the completion of the course, as also at the end of the first three years. Examinations are also held at the end of every term and year.

In what follows, such details are given as may be of interest to those who contemplate taking the course.

Mathematics—6 hours weekly, Junior Year, both terms. See Synopsis of Course.

French and German—Students in this course take in the Junior Year the regular studies of the Junior Class in both German and French, 3 hours each. In the Senior Year, French is continued, 3 hours during the Winter half-term.

Drawing and Descriptive Geometry—Drawing is begun at once in the first term of Freshman Year, under the charge of the Street Professor of Drawing in the Art School, and includes practice in free hand drawing. In the second term, under the Instructor in Instrumental Drawing, the students take isometric drawing with application to drawing from models and structures by measurement, shading, tinting, conventional use of colors, principles of orthographic projections, and practice in making simple working drawings, 4 hours both terms.

The Drawing of Junior Year, 3 hours both terms, includes Descriptive Geometry, the drawing of structures from measurement, and elements of design for simple structures. The instruction is by recitations,

lectures, practical exercises and models, and is under the charge of the Instructor in Instrumental Drawing and the Professor and Instructor in Civil Engineering. Included in the work of this year is also the mapping of surveying field notes.

In the Senior Year, the drawing consists of the mapping of the surveys of that year, and the designing of structures and finished drawings, designs and estimates, under the charge of the Professor and Instructor in Civil Engineering, 6 hours both terms.

Surveying and Field Engineering—The instruction in the field occupies about 20 hours for six or more weeks in both terms of Junior and Senior Year. The exercises at these times are so arranged as to secure as much consecutive time as possible in the field. In Junior Year, the use and adjustments of the instruments are learned and practice surveys made, together with recitations and lectures upon surveying operations and methods of keeping field notes. Levels are run, surveys made, plotted, and checked; blue print copies of drawings made, the use of compass, level and transit acquired. In the second term of Junior Year, land and topographical surveys are made and railroad curves run.

In the first term of Senior Year, a line of railroad is located and set out from a contour map previously obtained, grades and curves established and set out, and computations made. The theory of the economic location is taught by lectures and recitations in connection with the field work. The work is arranged so that each student has sufficient practice in all the various operations. The text-books used are Gillespie and Johnson's works, Henck's Field Book, Gore's Elements of Geodesy, and Merriman's Theory of Least Squares. The course is under the charge of the Professor and Instructor in Civil Engineering, aided by several assistants.

Mechanics of Engineering—Senior Year, 6 to 8 hours, both terms. The text-books of Weisbach, 1st and 2d volumes, are used in connection with lectures and solution of practical problems in illustration of the various topics. The course includes thorough instruction in the strength of materials, the stability of foundations, retaining walls, dams and embankments, and masonry arches, by lectures and graphic methods. Questions of hydraulics, water supply, and measurement of discharge, receive attention, and the theory and construction of water motors. A course in Thermodynamics with application to air and steam engine is also included.

Construction and Design—Senior Year, 6 hours both terms. A thorough course is given in the determination of stresses and the detailed design of roofs, bridges, etc., with working drawings, specifications, and estimates. Visits of inspection are made, and recitations and lectures held in connection with the work in the drawing room.

Astronomy—A course is given under the charge of the Professor in Astronomy, 6 hours, second term of Senior Year, including practical work and the use of the sextant and transit in determining time, latitude, and azimuth.

Geology—This course occupies 3 hours up to the middle of the second term of Senior Year.

Mineralogy—This course, under the Instructor in Mineralogy, occupies three hours up to the middle of the second term in Senior Year.

A course of lectures on the theory of electricity and its applications, by the Professor of Physics, is open to students in this department, and can be taken as a part of the preparation for a graduate course in the higher branches of electrical science.

MECHANICAL ENGINEERING—The objects aimed at in the plan of instruction in this course are, to give to the student a thorough training in elementary and advanced Mathematics and Physics, and their application to the Science of Construction; to make him familiar with the general principles of Engineering and with the practical details of mechanical construction through which these principles are made useful; and to enable him ultimately in beginning the work of his profession to bring to bear upon it a well balanced store of theoretical and practical knowledge, and a mind trained in correct habits of thought and work.

The complete course covers five years, three of which are spent in undergraduate study, and two in a graduate course, a portion of which may be spent in actual practical work. The subjects and methods of instruction in the undergraduate course are as follows :—

Mathematics—See synopsis, page 79.

French and German—Students take in the Junior year the regular studies of the Junior Class in both French and German. In the Senior year, French is continued during the Winter half-term.

Surveying—A short course in Surveying comprises lectures on methods of surveying and the construction and use of instruments, also practice in field work in the use of the level and transit, city surveying, establishing grades, and laying out buildings.

Shop Visiting divides the time equally with Drawing in the Junior year until the Spring Recess. The student, accompanied by the instructor, is employed in studying machinery in use and in process of construction in different machine shops in the city. He is required to make satisfactory, carefully dimensioned sketches, from measurements taken by himself, of the complete machines and their parts, and to describe the tools and mechanical operations used in producing the simpler pieces.

Drawing—Descriptive Geometry is taught in the drawing room by lectures and recitations, and by exercises at the drawing board, where

the problems are solved graphically by the student. Instruction in *drawing Machine Elements* is given in the Junior year. Models and cartoons showing examples of approved practice are used by the instructor, who also gives personal attention to each student's work at the board as it progresses.

Principles of Mechanism—This is a course in theoretical and applied Kinematics. Instruction is by text-books and lectures illustrated by diagrams and models, an extensive collection of which belongs to the School and is accessible to the student.

Steam Engine—Recitations and lectures in this subject begin in the Junior year, after the Spring Recess. They relate to the structural details of engines and to the mechanical principles involved in their working. The subject is continued in the first term of Senior year, when particular attention is directed to various kinds of valve gear, the governor, the fly-wheel, balancing, and the effect of the weight of the reciprocating parts. In the second term of Senior year, the study of *Steam Boilers* takes the place of that of Engines.

Indicator Practice—In the Senior year, the student is afforded opportunities to apply the indicator to various engines in operation, and has practice in reading indicator cards and measuring them by the planimeter. He is taught to detect such defects in the engine as are shown by the cards.

Applied Mechanics—In this course lectures, recitations, and exercises in the solution of practical problems, relate to the topics specified under this head in scheme on page 80.

Thermodynamics—Recitations and lectures on the mechanical theory of heat and its application to hot-air engines, gas engines, and the steam engine.

Machine Design—The course in this subject consists chiefly in practical exercises at the drawing board, and partly in lectures on the functions of machines and the mechanical principles which are applied in determining the proportions of machinery. The student, under the guidance of an experienced instructor, is employed in making complete working drawings of machines, many examples of which are in the drawing rooms and the basements of the school. He does not copy the examples, but is required to change the dimensions and in many cases to alter the design, and is ultimately taught to make partly new designs of important machinery, such as cranes, yacht engines, machine tools, boilers, etc. The discipline the student receives is such as he would obtain in the drawing office of an engineering establishment, while he is also carefully instructed in the theory of the subjects he deals with, and in the practical bearing of all his work.

In the Senior year, several excursions are made by the class, accompanied by one or more instructors, to neighboring manufacturing and engineering centers, where large manufactories, pumping works, ocean

steamers, etc., are visited. Full notes must be taken, and a satisfactory written report upon the machinery examined is required of the student.

Thesis—Before graduating, the student must present a satisfactory thesis on some subject approved by the professor in charge of the department of Mechanical Engineering.

A course of lectures on the theory of Electricity and its applications is open to students in this department, and these lectures can be taken as a part of the preparation for a graduate course in the higher branches of electrical science.

ASTRONOMY—Students in the Select Course receive instruction in Astronomy during Junior year, first term, four hours per week.

Students of Civil Engineering during the second term of their Senior year have six recitations per week, and also practical experience in the determinations of time, azimuths, latitude, longitude, etc.

ENGLISH—The course is designed to give the student acquaintance with the great representative writers of the various epochs. A history of the language is one of the studies of the Freshman year; and after that year the study of the language is made entirely subordinate to that of the literature. During the first term of Junior year, however, extracts from Early English authors are read, and Early English grammar studied, so as to familiarize the student with the inflections then in use and the distinctions existing between the leading dialects. It is the aim of this term's work to give such knowledge of forms, and to some extent of words, that the student will be able to read at sight any Early English author whose writings do not involve special difficulties of language or vocabulary.

With the second term, the regular study of English literature proper begins with Chaucer; and for the rest of the course till the end of Senior year the following authors are read: Bacon, Shakespere, Milton, Dryden, Pope, Gray, Goldsmith, and later writers. Those mentioned in the lists are always studied, but other authors not named are also taken up, the course varying somewhat in different years. In all cases complete works of a writer are studied, not extracts; as for instance several of Chaucer's Tales, and several of the plays of Shakespere. The authors are taken up in chronological order, and the literary history of the time is likewise carried on in connection with the great representative writers of each period.

GERMAN—The aim in this department is to give such a knowledge of facts and principles as shall qualify the student as rapidly as possible to use the language for such various purposes as his special needs may require, and particularly to facilitate the use of German treatises in his later special studies. To accomplish this, the course consists of the combination of the study of systematic German grammar with a complement-

ary and progressive course of oral translation from English into German, the latter being designed for the double purpose of increasing the command of grammatical principles, and through the establishment of a habit of ready and accurate expression, of laying the foundation for future colloquial use of the language. In connection with the foregoing, it is attempted to introduce the student to as many different styles and as many forms of composition as the time allows. For this purpose the reading matter is in general selected from readers and collections prepared for the use of schools in Germany, and characterized by the number and variety of their extracts, thus enabling the instructor to select pieces that illustrate one another and to avoid similar lines of reading with successive classes. Constant attention is paid during a portion of the course to English affinities, to analogies in the formation of English and German abstract terms, to the commoner rhetorical resemblances and differences, to the details of arrangement in German sentences, and the development of secondary from primary significations of words.

In view of the shortness of the course there is no attempt to secure any considerable acquaintance with German literature. A body of representative pieces of lyric poetry, however, is made the basis of careful literary study, with special attention to poetic diction and variety of metrical form. Memorizing German poems is practiced to some extent as a class exercise, as also retranslation of dictated literal versions of simple pieces into German verse, in accordance with prescribed rhythm and sequence of rhyme.

Occasionally, when the proficiency of a class allows it, an advanced division is organized, which is thus enabled to read a much larger amount of matter and to pursue more critical methods. The attention of such a division is sometimes given for a few months to extracts treating of leading events in German history, with a collateral course of German historical poetry, the selections being made so as to be mutually illustrative. Historical poems not contained in the text-books are often furnished by dictation.

During the last few weeks of the course, there is an attempt to initiate the student into the art of rapid and intelligent, though uncritical reading, dispensing largely with dictionary and grammar and aiming to form independent habits of observation and induction. For this purpose recourse is had to entertaining novels.

In general, it is the endeavor, while aiming primarily and constantly at acquiring a working knowledge of contemporary German, to combine habitually scientific and empirical methods, to enforce correct notions as to the nature of language, to secure incidentally some of the most important disciplinary results of elementary linguistic study, and to give some conception, by suggestive questions and occasional statements, of the various special directions which a more extended and advanced course would necessarily take.

The time allotted to the subject is three hours a week during the Freshman and Junior years.

Regular text-books: Whitney's German Grammar; Whitney's German Dictionary; Ahn's Exercises, or Eysenbach's German Exercises.

FRENCH—To avoid repetition, it will suffice to state that much the same course is pursued in French as above detailed for the German, and on like principles. The three weekly exercises extend through the entire Junior, and most of the Senior year, based on a systematic review of the essential elements as exhibited in Whitney's French Grammar, supplemented by Ahn for the more practical part. In the Junior year, a wide extent of reading is insisted on, beginning with the simpler novels, such as "Le Conscri," "L'Ami Fritz," "La Petite Fadette," etc., through a scale of diversified vocabulary by which at last sight-reading of such matter as is more appropriate to the department may be profitably entertained. The practical or conversational course runs along parallel with the more systematic study of the language.

In the second year, the aim is to familiarize the student with practical terms and expressions of a scientific cast, rather than with the purely literary language. Hence practical works, such as books of travel and Maxime Du Camp's Paris, ses Organes, ses Fonctions et sa Vie, especially those chapters describing the railways, the sewers, the Seine, the street-lighting, etc., have seemed best adapted to the general object in view.

HISTORY—The greater part of the work is carried on by means of recitations, Green's Short History of the English People being used as a text-book. The students are also required to look up special topics, and to give the results of their studies to the class: the books used for this purpose are drawn from a small historical library in the class-room. The location of places is enforced by the use of outline maps which the students are required to fill in. Particular attention is given to the history of institutions and to the constitutional and economic growth of the country.

POLITICAL ECONOMY—In the beginning of the course, an effort is made to familiarize the students with the fundamental principles of Economics and more particularly to train them in economic reasoning. More difficult problems are then taken up and discussed, and special topics are assigned to the class for investigation. A small library has been provided, which contains a number of copies of each of the principal authorities, in order that the students may be able to familiarize themselves somewhat with the literature of the subject, without expense to themselves.

THE TERMS AND VACATIONS correspond with those of the College. (See Calendar, p. 6.)

EXPENSES—The charge for tuition for undergraduate students is \$150 per year, payable \$55 at the beginning of the first and second terms, and \$40 at the middle of the second term. An additional charge of \$5 a year is made to each student for the use of the College Reading Room and Gymnasium, which is payable at the beginning of the first term, making the total charge for that term \$60. The student in the Chemical course has an additional charge of \$60 per annum for chemicals and use of apparatus. He also supplies himself at his own expense with flasks, crucibles, etc., the cost of which should not exceed \$10 per term. A fee of \$5 is charged members of the Freshman Class for chemicals and materials used in their laboratory practice, and the same fee is required from all (except Chemical students) who take practical exercises in Blowpipe Analysis and Determinative Mineralogy. A fee of \$5 a term is also charged to students in the Zoological and Anatomical Laboratories, for materials and use of instruments.

For the graduate students the charge for tuition is one hundred dollars per year.

THE GRADUATION FEE in the case of BACHELORS OF PHILOSOPHY is ten dollars, unless the person taking the degree is also a graduate of the College, when the fee is but five dollars.

SCHOLARSHIPS

STATE SCHOLARSHIPS—By an Act passed in 1863, the General Assembly of Connecticut established certain scholarships from the income of the fund derived from the National Grant of July, 1862, for the promotion of scientific education. There are now about twenty-three of these scholarships (the number depending upon the income of the fund), designed to aid by free tuition young men fitting themselves more especially for pursuits in agriculture, manufacturing, and engineering.

The applicants must be citizens of Connecticut. The appointing board consists of the Board of State Visitors (see p. 73), and the Secretary of the School; it meets on the Tuesday before Commencement (viz: on June 25, 1889), to fill the vacancies for the next University year. Applications should be made, previous to that date, to Professor George J. Brush, Secretary of the appointing Board.

THE HOLMES SCHOLARSHIP, founded by Samuel Holmes, Esq., amounts to \$60 per year. The recipients must be citizens of Middlebury, Prospect, Waterbury, or Wolcott, Connecticut; the appointments are made by the Board of Agents of the Bronson Library in Waterbury.

DEGREES

THE DEGREE OF BACHELOR OF PHILOSOPHY is conferred on those who have completed one of the three-year courses, and have passed the examination at its close.

CIVIL ENGINEER AND DYNAMIC OR MECHANICAL ENGINEER—see page 102.

DOCTOR OF PHILOSOPHY—see page 101.

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COURSES OF GRADUATE INSTRUCTION

FACULTY

REV. TIMOTHY DWIGHT, D.D., LL.D., PRESIDENT

REV. NOAH PORTER, D.D., LL.D., *Professor of Moral Philosophy and Metaphysics*

ELIAS LOOMIS, LL.D., *Professor of Natural Philosophy and Astronomy*

JAMES D. DANA, PH.D., LL.D., *Professor of Geology and Mineralogy*

CHESTER S. LYMAN, M.A., *Professor of Astronomy*

REV. JAMES M. HOPPIN, D.D., *Professor of the History of Art*

EDWARD J. PHELPS, LL.D., *Professor of Law*

WILLIAM D. WHITNEY, PH.D., LL.D., *Professor of Sanskrit and Comparative Philology*

HUBERT A. NEWTON, LL.D., *Secretary, and Professor of Mathematics*

GEORGE J. BRUSH, LL.D., *Professor of Mineralogy*

SAMUEL W. JOHNSON, M.A., *Professor of Theoretical and Analytical Chemistry*

WILLIAM H. BREWER, PH.D., *Professor of Agriculture*

JOHN F. WEIR, N.A., M.A., *Professor of Painting*

JOHN E. CLARK, M.A., *Professor of Mathematics*

DANIEL C. EATON, M.A., *Professor of Botany*

ARTHUR M. WHEELER, M.A., *Professor of History*

ADDISON VAN NAME, M.A., *Instructor in Japanese*

J. WILLARD GIBBS, PH.D., *Professor of Mathematical Physics*

CHARLES B. RICHARDS, M.A., *Professor of Mechanical and Dynamical Engineering*

ARTHUR W. WRIGHT, PH.D., *Professor of Experimental Physics*

THOMAS R. LOUNSBURY, M.A., *Professor of English*

OTHNIEL C. MARSH, PH.D., LL.D., *Professor of Palaeontology*

WILLIAM I. KNAPP, PH.D., *Professor of Modern Languages*

JOHN H. NIEMEYER, M.A., *Professor of Drawing*

TRACY PECK, M.A., *Professor of Latin*

ADDISON E. VERRILL, M.A., *Professor of Zoology*

WILLIAM G. SUMNER, LL.D., *Professor of Political and Social Science*
REV. GEORGE T. LADD, D.D., *Professor of Mental and Moral Philosophy*
SIDNEY I. SMITH, M.A., *Professor of Comparative Anatomy*
WILLIAM G. MIXTER, M.A., *Professor of Chemistry*
HENRY P. WRIGHT, PH.D., *Professor of Latin*
HENRY A. BEERS, M.A., *Professor of English Literature*
A. JAY DUBOIS, PH.D., *Professor of Civil Engineering*
EDWARD S. DANA, PH.D., *Assistant Professor of Natural Philosophy*
THOMAS D. SEYMOUR, M.A., *Professor of Greek*
CHARLES S. HASTINGS, PH.D., *Professor of Physics*
WILLIAM R. HARPER, PH.D., *Professor of the Semitic Languages*
FRANK A. GOOCH, PH.D., *Professor of Chemistry*
GEORGE B. ADAMS, PH.D., *Professor of American History*
HENRY W. FARNAM, R.P.D., *Professor of Political Economy*
RUSSELL H. CHITTENDEN, PH.D., *Professor of Physiological Chemistry*
ARTHUR T. HADLEY, M.A., *Professor of Political Science*

OTHER INSTRUCTORS

REV. SAMUEL HARRIS, D.D., LL.D., *Professor of Systematic Theology*
REV. GEORGE P. FISHER, D.D., LL.D., *Professor of Ecclesiastical History*
WILLIAM C. ROBINSON, LL.D., *Professor of Law*
SIMEON E. BALDWIN, M.A., *Professor of Comparative Jurisprudence*
JOHNSON T. PLATT, M.A., *Professor of General Jurisprudence*
FREDERIC R. HONEY, PH.B., *Instructor in Perspective*
JOHN P. C. FOSTER, M.D., *Instructor in Anatomy*
REV. JOHN E. RUSSELL, M.A., *Professor of Biblical Theology*
WILLIAM T. STRONG, M.A., *Instructor in German*
SAMUEL L. PENFIELD, PH.B., *Assistant Professor of Mineralogy*
HORACE L. WELLS, PH.B., *Assistant Professor of Analytical Chemistry*
EDWARD V. RAYNOLDS, D.C.L., *Lecturer on Roman and Constitutional Law*
FRANK P. GOODRICH, M.A., *Instructor in German*
HENRY C. WHITE, M.L., *Lecturer on Local Government*
RIKIZO NAKASHIMA, B.A., B.D., *Lecturer on the History of Philosophy*

The instruction of graduates, independently of the courses of study provided in the professional schools, had been attempted in an informal way before 1847, when such courses were definitely arranged, and the Department of Philosophy and the Arts constituted, with this object in view. The degree of Doctor of Philosophy was first offered in 1860, that of Civil Engineer in 1860, that of Dynamical or Mechanical Engineer in 1873, and that of Master of Arts (previously given without evidence of study) in 1874.

Graduates of this and other Colleges and Universities, and (in exceptional cases, by special permission) other persons of liberal education, who are not less than eighteen years old, are received as students for longer or shorter periods, with or without reference to the attainment of a degree.

An Executive Committee has a general oversight of the students in this Department. The Committee this year is composed of Professors WHITNEY, NEWTON, BRUSH, WHEELER, HARPER, and HADLEY. They receive the names of applicants for instruction, and judge and approve the courses of study proposed; and information may be obtained from them as to conditions, terms, etc. Students may also make special arrangements with any instructor according to their mutual convenience.

Instruction is given partly by lectures, partly by recitations and by oral and written discussions, partly by directing courses of reading, and partly by work in the laboratories and with instruments. There are also various voluntary associations, in which instructors and students meet together periodically for the reading of papers, oral discussions, etc.; such are, the Classical and Philological Society, the Mathematical Club, the Political Science Club, the Philosophical Club, the Semitic Club, etc.

The terms and vacations correspond with those in the Undergraduate Departments. (See Calendar, p. 6.)

The fee for instruction is generally one hundred dollars; but may be more, or less, according to the course pursued and the amount of instruction received. Students have the free use of the Library of the University (including the



Linonian and Brothers Library); and are admitted to the College Reading Room on payment of an annual fee of two dollars.

THE DEGREE OF DOCTOR OF PHILOSOPHY is conferred upon those who, after having taken a Bachelor's degree (implying a course of undergraduate study equivalent to that pursued in the Academical Department), and having studied in this Department for not less than two years, shall have passed a satisfactory final examination and presented a thesis giving evidence of high attainment in the branches of knowledge pursued. It is not given, upon examination, to those whose studies are pursued elsewhere. The requirements for it will in some cases exact of the student more than two years of labor; especially when the course of undergraduate study has been less than four years. A good knowledge of Latin, German, and French, will be required in all cases, unless, for some very exceptional reason, the candidate be excused by the Faculty. The graduating fee is ten dollars.

THE DEGREE OF MASTER OF ARTS is conferred on Bachelors of Arts of Yale College or of other Colleges, of two years' standing or upwards, who have given to the Faculty of the Academical Department evidence of having made satisfactory progress in liberal studies after receiving their first degree. Such evidence may be furnished by one year's systematic study (not professional) in New Haven, under the direction of the Academical Faculty, followed by an examination. Graduates of other Colleges can obtain the degree only by residence as thus described.

Such Bachelors of Arts of *Yale College* as may not choose to reside at the College for the prosecution of study may show at any time, not less than three years after graduation, by their printed essays, or by submitting to special exam-

inations, that they have spent a year in liberal (and non-professional) study, and are worthy of recommendation for this degree.

A committee of the Faculty is appointed (consisting for the present year, of Professors NEWTON and WHEELER), to whom candidates for this degree must submit their proposed courses of study for approval by the first of November in each year ; and the evidence of a year's study must be submitted to the same committee by the first of June.

In the case of resident students, the charge for instruction will usually be one hundred dollars, with a fee of ten dollars for the degree. In the case of non-residents, the fee for examinations and the degree will usually be twenty-five dollars.

THE DEGREES OF CIVIL ENGINEER AND MECHANICAL (OR DYNAMICAL) ENGINEER are conferred on Bachelors of Philosophy who have taken the first degree in Engineering study, and who pursue a higher course under the direction of the Governing Board of the Sheffield Scientific School, for at least two years, sustaining a final examination, and giving evidence of their ability to design important constructions, and to make the requisite drawings and calculations. The fee for graduation is five dollars.

The Courses of Instruction may be grouped as follows :

I. PSYCHOLOGY ; ETHICS ; PHILOSOPHY

Ex-President PORTER :—*Philosophy ; Ethics*. This course will include special topics in the theory of knowledge, and the relations of Science to Theism ; the theory of Ethics, and the relations of Ethical to Political Science.

The undergraduate courses in *Ethics and Philosophy* are also open to graduate students.

Professor LADD :—I. *Psychology and Metaphysics*. A course of lectures (one hour a week, through the year) on Psychology, the Theory of

Cognition, Metaphysics, and the Philosophy of Religion. This course occupies two years. The subjects for 1888-89 are taken from *Psychology* and *Metaphysics*.

2. *Philosophy*; two hours a week through the year. This course comprises the critical reading of Kant's Critique of Pure Reason, his Critique of Practical Reason, and his Metaphysics of Ethics. It will consist of lectures, text-book exercises, discussions, papers by the pupils, etc.

3. *Philosophy*; one hour a week through the year. This course is designed for the most advanced students; it will comprise a careful study of Hegel's Philosophy of History and his Logic,—in the original and by the help of translations.

The undergraduate courses in *Physiological Psychology* and *Philosophical Anthropology* are also open to graduate students (see p. 37).

Professor HARRIS:—*The Philosophical Basis of Theism and the Self-Revelation of God*. This course of instruction for the Junior class of the Divinity School, is open to graduate students on applying to the Professor.

The course designed for graduate students of the Divinity School, for the free discussion of topics in *Systematic Theology*, will also be open to graduate students of philosophy, on application to the Professor.

Professor J. E. RUSSELL will receive graduate students of philosophy to his exercises and lectures on the *Philosophy of Religion*, with the graduate class of the Divinity School.

Mr. DUNCAN's undergraduate courses in *Inductive Logic* (one hour a week, through the year) and in the *History of Modern Philosophy* (two hours a week, through the year), are open to graduate students.

Mr. NAKASHIMA will lecture on the *History of British Philosophy* from Locke to Hume, as introductory to the study of Kant, two hours a week, through the year.

II. POLITICAL AND SOCIAL SCIENCE; HISTORY; LAW

Professor SUMNER:—1. *Finance and Politics in the History of the United States*; two hours a week through the year. This course deals with the history of the United States as a field for the study of currency, banking, tariff, public finance, the history of political economy, the art of politics, the science and art of government, and the art of legislation. It occupies two years. In 1888-89 the second part, 1830-88, will be given. It is assumed that those who attend this course have a good knowledge of the civil history of the United States.

2. *The Industrial Organisation of Society*; two hours a week through the year. This course is one of advanced Political Economy. It treats of the modern industrial system in its evolution and existing organi-

zation. During the coming year typical forms of the organization of production will be studied, and the elements which enter into them will be compared for the light which they throw on the modern wages system. It is proposed to examine the phases through which the industrial organization has passed, and to study the phenomena of industrial revolution. Attention will also be given to incidents in the history of the production of the precious metals, and in monetary legislation, which have had contributory effect on industrial revolutions.

3. *Anthropology*; two hours a week through the year. This course takes up the study of anthropology, sociology, archaeology, ethnology, and human palaeontology. It alternates with course 2, and will not be given in 1888-89.

4. *The Logic and Method of the Social Sciences*. Six lectures on fallacies of method in the social sciences; the existing controversies about method; the use and misuse of history and statistics; the requirements now made of statistics and chance of their satisfaction; what history is and what its functions can be; discrimination between the categories which are historical and those which are not; the field of analysis and interpretation; the use and abuse of deduction.

[Candidates for a degree are required to pursue, and to be examined on, a course of reading in the leading textbooks of Political Economy, which will be prescribed by Professor Sumner for each student upon consultation.]

Professor FARNAM:—1. *The Principles of Public Finance*; two hours a week through the second term. A systematic survey of the means by which the expenditures of government are met, regard being had both to the economic principles involved and to the fiscal systems of modern states. Leading topics are: the budget, taxation (national and local), public debts, and state banks considered as aids to public credit.

2. *The History of Labor Organizations*; one hour a week, during the first term. A brief account of societies of artisans from the origin of the guild system to the present time, showing their relation to the mechanical arts on the one hand and to the governmental control of industry on the other.

Professor HADLEY:—1. *Corporations*; two hours a week, during the first term. The history of corporate ownership; its effects upon labor, prices, and profits, with the legislation of different states and countries on these subjects; the limits of public and private activity in corporate business. This course covers somewhat the same ground as the second half of the course on Industrial Legislation given in previous years.

2. *Railroad Administration*; two hours a week, during the second term. This course deals with railroad expenditures and receipts, the methods of railroad accounting, railroad rates and discriminations and their effects upon the community, the various methods of legislative control and their results.

Mr. RAYNOLDS:—1. *Roman Law*; one hour a week through the year. An elementary course in the History and Institutes of Roman Law and its relation to modern Codes.

2. *Comparative Constitutional Law*; two hours a week, during the second term. A comparative study of the modern constitutional state, especially with regard to the principal forms of constitutional government, the constitution, powers and relations of the governmental departments, and the laws and practices of elections in the various states.

Mr. WHITE:—*Local Government in the United States*; one hour a week, during the first term. This course treats of the development and present status of the institutions of local government in this country. The legal functions of American cities, villages, counties, and towns, and other municipal corporations and quasi-corporations, will be discussed and compared with the functions of the local governments of England, Germany, and France. Especial attention will be given to the practical problems of city government, and the attempts to solve them, with the results thus far attained.

Professor BREWER:—*Physical Geography in its relations to Political History*. A course of about ten lectures, during the first term, discussing the following topics: 1. The physical relations of man to the region he inhabits; 2. Natural aids to the defence and protection of communities; 3. The physical conditions and natural productions necessary for civilization; 4. Natural facilities for commerce; 5. The effects of natural conditions now modified by modern inventions.

Professor WHEELER:—*English History*; one hour a week through the year. This course covers two years. The object is to trace carefully the long, continuous, and, on the whole, orderly development of English political institutions. Special topics are assigned, and the best sources of information indicated. Particular attention is devoted to the early and mediaeval periods, and for these the work of Bishop Stubbs will be the leading authority. This year the second part of the course will be given.

Professor ADAMS:—*American History*. Special questions of American Constitutional History which grew out of the Missouri Compromise and the Dred Scott decision, as relating to it. The work will consist chiefly of investigation in the original sources.

III. PHILOLOGY ; LITERATURE

Professor WHITNEY :—1. *Sanskrit* ; four hours a week through the year.

A first-year's instruction in Sanskrit, beginning with the instructor's Sanskrit Grammar, and passing on to Lanman's Reader. A sketch of Sanskrit literature is given in connection with the exercises during the latter part of the year.

2. *Linguistics* ; one hour a week, during the second term. A series of exercises—mingled lecture, recitation, and discussion—on the leading topics of the general study of language, following and using as text-book the instructor's *Life and Growth of Language*, is given if a class of six or more is formed.

Professor HARPER, assisted by Mr. CRANDALL, Mr. GOODSPEED, and Mr. SANDERS :—1. *Hebrew and the Old Testament* :—

(1.) *Genesis, i-viii*, including (a) the grammatical principles of the language ; (b) acquisition of a vocabulary ; (c) translation of English into Hebrew : five hours a week, first term.

(2.) *Genesis, i-viii*, etc. Same course as preceding, but continuing up to the Easter Recess : two hours a week. [For Academic students.]

(3.) *The Book of Judges*, critical translation, with a study of (a) nominal and verbal forms ; (b) the accents ; and (c), in connection with Judges v, the principles of Hebrew Poetry : two hours a week (after Easter Recess).

(4.) *Hebrew Syntax*, including the noun, verb, verbal government, the sentences, kinds of sentences : one hour a week, second term.

(5.) *Hebrew Readings*, (a) in Isaiah xl-lxvi and Ezekiel : two hours a week, first term ; (b) in Samuel and Kings : three hours a week, second term ; (c) in Chronicles, Nehemiah, and Esther : two hours a week, second term. [No preparation required of the student.]

(6.) *Hexateuchal Analysis*, translation and comparison of the several documents of which the Hexateuch is composed, with an examination of the grounds on which the analysis rests : three hours a week, second term.

(7.) *Old Testament Wisdom*, including (a) a critical study of Job, Proverbs, Ecclesiastes, and Canticles ; (b) consideration of the origin, structure, characteristics, and purpose of these books and (c) a study of the Hebrew Wisdom, its history, form, contents, its relation to the Law, to Prophecy : two hours a week, both terms.

(8.) *Prophets of the Pre-Assyrian Period*, a textual, grammatical, exegetical, and historical study : two hours a week, both terms.

(9.) *Old Testament History*, third period ; from the fall of Samaria (722 B. C.) : one hour a week, both terms. [University Lecture.]

2. *Assyrian and Babylonian* :—

(1.) *Assyrian for Beginners*, including (a) the grammatical principles ; (b) study of the transliterated and cuneiform texts in Lyon's *Assyrian Manual* : two hours a week, first term.

(2.) *Assyrian Syllabaries*, Delitzsch's *Assyrische Lesestücke*, pp. 53-67, II, and V. Rawlinson: one hour a week, both terms.

(3.) *Assyrian Deluge Account*, Delitzsch's *Assyrische Lesestücke*, pp. 101-109, Lyon's *Assyrian Manual*, pp. 57-62, with a comparison of the biblical accounts: one hour a week, first term.

(4.) *Esarhaddon*, Cylinder A (I. R. 45-47), after Robert F. Harper's collation of the original in the British Museum: one hour a week, first term.

(5.) *Sennacherib Constantinople* (I. R. 43-44): one hour a week, second term.

(6.) *Nebuchadnezzar East India House* (I. R. 53-58 [59-64]): one hour a week, second term.

3. *Arabic, Aramaic, and Ethiopic*.—

(1.) *Arabic for beginners*, including (a) the grammatical principles; (b) translation of Genesis i-iii and selections from the Kuran: two hours a week, first term.

(2.) *Kuran*. Suras written from the tenth year of Muhammed's ministry to the flight from Mecca, 46, 72, 35, 36, 19, 18, 27, etc., about thirty in all: two hours a week, first term.

(3.) *Kuran*. Selections from the Suras given at Medina (98, 2, 3, 8, 47, 62, 5, 59), with a study of Arabic Syntax: one hour a week, second term.

(4.) *Arabic Poets and Historians*, using Arnold's *Chrestomathy*: one hour a week, second term.

(5.) *Aramaic*, using Brown's *Aramaic Method and Manual*: one hour a week, second term.

(6.) *Ethiopic*, principles of grammar and translation in "Liber Baruch" and "Carmina," Dillmann's *Chrestomathia Ethiopica*: two hours a week, second term.

Mr. VAN NAME:—*Elements of the Japanese Language*, and exercises in the reading of both transliterated and native texts. One or two hours a week, both terms.

Professor SEYMOUR:—*Greek*.—1. *Plato*. Two hours a week through the year; rapid reading, in order to further familiarity with Plato's style and works.

2. *Greek Dialects*. Three hours a week during the first half of the year. Cauer's *Delectus Inscriptionum Graecarum* will be used in connection with the fragments of the Lyric Poets.

3. *Pindar and the Lyric Fragments*, with special reference to Greek Metres. Three hours a week during the last half of the year.

The undergraduate elective courses in Greek (p. 45) are open also to graduate students.

Professor PECK:—*Latin*.—1. *Early Latin*. One hour a week through the year. Allen's *Remnants of Early Latin* and Smith's *Latin Selections* will be used as the basis of instruction.

2. *Tacitus* (Annals i-vi). Two hours a week during the first term.
3. *Lucretius* (books i, ii, v). Two hours a week during the second term.

4. *Latin Composition*. One hour a week through the second term.

In connection with all these courses special topics will be assigned for investigation and discussion, as, the Latinity and literary canons of the different authors and periods, the rationale of constructions, historical syntax, pronunciation, etymology, etc.

The Latin undergraduate elective courses (p. 44) are open also to graduate students.

Professor BEERS:—1. *Anglo-Saxon*; one hour a week through the year. This course is limited to students who have some elementary knowledge of Anglo-Saxon. The texts selected for reading in the year 1888-89 are, *The Anglo-Saxon Chronicle* (Skeat's Edition), *Caedmon's Exodus* (Hunt's Edition), and *Andreas* (Baskervill's Edition). *Sievers's Grammar* is used and reference made to *Earle's Anglo-Saxon Literature*.

2. *English Literature*. Graduate instruction in this subject has been given by the assignment of reading courses to individual students according to their several requirements. They have been called upon to keep full notes of their reading, and to submit these from time to time to the instructor. For the year 1888-89, it is proposed to form such students into a class meeting regularly once a week, provided there is a large enough number to warrant the formation of such a class. In that case the subject of study for the year will be the history of English romanticism from Thomson to Keats (1726-1821).

The undergraduate courses in the English Language and literature (pp. 42, 43) are also open to graduate students.

Professor KNAPP:—*Spanish*; *Italian*; *Old French and Provençal* (including *Catalan, ancient and modern*).

The undergraduate courses in French, Spanish, and Italian are also open to graduate students,

Mr. STRONG and Mr. GOODRICH:—*German*. Of the Elective courses offered to undergraduates, Nos. 35 and 37 (p. 41) are also open to graduate students.

IV. MATHEMATICS

Professor NEWTON:—*Analytical Statics*; *The Dynamics of a Particle, and of a System of Particles*.

The Mathematical Theories of Shooting Stars and Meteors, and the Treatment of Observations of them; *The Lunar and Planetary Theories*. *Higher Geometry*.

Professor CLARK:—*Determinants, with applications*.

Theory of Curves and Surfaces.

Definite Integrals; *Differential Equations*.

The Kinematics of a Rigid Body.

Professor GIBBS:—*Vector Analysis*, with especial reference to physical applications.

Theory of the Potential, and allied topics.

Mathematical Theory of Electricity and Magnetism.

Electro-magnetic Theory of Light. Propagation of the electrical disturbance in isotropic and aeolotropic media. Reflection at a surface where two such media meet. Dispersion of colors.

A short course on *The a priori Deduction of Thermodynamic Principles from the Theory of Probabilities*.

Graduates will also in many cases find it profitable to take some of the mathematical courses offered to the undergraduates. (Cf. p. 48.)

V. PHYSICS; CHEMISTRY

Professor LOOMIS:—*Meteorology*, with special reference to the laws of storms.

Professor A. W. WRIGHT:—*Experimental Physics*. Direction of practical work in the Sloane Physical Laboratory, with instruction in the principles and methods of physical investigation, the processes and instruments of measurement, and the methods of computing and reducing results of observations. Special attention is paid to practical measurements in electricity and magnetism.

The student is expected to make original investigations an important part of his work, and has the free use of the laboratory facilities for carrying them on.

Professor HASTINGS:—A course in *Physics* will consist of laboratory work, supplemented by lectures on the theory of observation, with the method of least squares, and, each year, some special department of physics will be selected for detailed treatment in a course of lectures and conferences. Lectures on the theory of electricity and electrical instruments occupy six months. The use of the laboratory is at the command of the student at all times.

Professor JOHNSON:—*Organic Chemistry*: Paraffines and their derivations, two hours weekly throughout the year; Aromatic Compounds, two hours a week during the first term. Systematic review of the various classes of carbon compounds, with study of substances that illustrate current chemical doctrines or are important in nature and in the arts. Experimental demonstrations.

Professor WELLS:—*Analytical Chemistry*; including a systematic course in Qualitative Analysis, a systematic course in Quantitative Analysis, and such special branches of Quantitative Analysis as are applied to Mineralogy and various departments of Metallurgy.

Instruction in analytical processes and chemical principles involved in them, is given to each student separately in the laboratory. Laboratories are open seven hours daily (except Saturdays).

Professor CHITTENDEN:—*Physiological Chemistry.* Graduate students having sufficient knowledge of analytical chemistry and physiology are received into the laboratory at the beginning of the academic year, where they can pursue a course in physiological chemistry and toxicology, extending throughout the entire year. The course necessitates, on an average, four hours of laboratory work per day, and attendance on lectures and recitations three or four times per week. Opportunities are also afforded for the carrying on of original investigations, either in physiological chemistry or experimental toxicology, and to students qualified for such work the laboratory is open during the entire day.

Students desirous of studying any special subject in physiological chemistry and having but a limited amount of time are also received, provided they are qualified by previous work to pursue the study advantageously.

VI. GEOLOGY; NATURAL HISTORY

Professor J. D. DANA:—*Geology.* The subjects taught in the course are Physiographic and Lithological Geology, with Historical and Dynamical Geology in alternate years; and for an advanced elective, the reading and discussion of original memoirs and other publications in all these departments, together with work in the field. For practical illustrations of the various subjects, the instruction is supplemented by excursions to regions, severally, of sedimentary, metamorphic, and igneous rocks; of variously flexed, jointed, altered and degraded rocks; of seashore action and its results; of glacial, fluvial, and other Quaternary phenomena; excellent localities for the study of these various subjects are found in the vicinity of New Haven, but excursions extend also to neighboring parts of New England and New York.

Professors BRUSH, E. S. DANA, and PENFIELD:—*Mineralogy,* in its different branches: (1) Descriptive Mineralogy: including the study of mineral species individually and in their relations to each other in composition, association, and so on. (2) Crystallography and Optical Mineralogy: the study of the mathematical relations of the forms of crystals, the measurement of crystals on the goniometer and their practical determination; also, the study of the optical characters of the different groups of crystals, the determination of the position of the axes of light-elasticity, measurement of indices of refraction, of the optic axial angles, etc. (3) Determinative Mineralogy and Blowpipe Analysis: the study of the use of the blowpipe and its application to the determination of a mineral species.

Microscopical Petrography: the methods of research and the use of the microscope, the practical study of rocks in thin sections and in hand specimens.

Professor EATON:—*Botany.* At present there are no facilities for the profounder study of Vegetable Physiology. Structural Botany is taught in a practical way to the extent of preparing and examining microscopic specimens of the various tissues and elements found in phaenogams, and in cryptogams exclusive of fungi, including the use of the ordinary solvents, dyes, reagents, and mounting media used in this study. For the study of the North American Flora generally, and the higher orders of cryptogams, with regard to their identification and geographical distribution, the facilities are excellent, and, under proper restrictions, students may have the privilege of consulting the very extensive private collections of the professor in charge.

Professor VERRILL:—*Zoology.* The course includes laboratory practice, recitations, readings, and lectures. The laboratory work is varied according to circumstances, in order to accommodate, so far as possible, those students who may wish to pursue special branches. A large part of the time is usually devoted to Comparative Anatomy, Morphology, and Systematic Zoology. Ample collections in the Peabody Museum, representing all classes of animals, are available for instruction, while the proximity to the sea renders it easy to provide fresh or living examples of most classes of marine animals for study and dissection.

All students in this course should be familiar with the use of the microscope. A knowledge of drawing sufficient to enable the student to make sketches of the objects studied is very desirable.

Professor S. I. SMITH:—*Elementary Anatomy and Histology* ; two to four half-days a week during the first term. Laboratory instruction will be given with special reference to preparation for medical studies, or as a preparation for further biological study and investigation. The instruction will be adapted as far as possible to the special wants of the individual student.

During the last part of the second term, graduate or special students who desire to do so may attend the short course of lectures on embryology, with special reference to human morphology given to undergraduates in the course in biology (see above, p. 82).

VII. APPLIED SCIENCE

Professors LYMAN and DuBois:—*Practical Astronomy.* Instruction, especially adapted to candidates for the degree of Civil Engineer, is given in practical Astronomy applied to Geodesy, using as guides the treatises of Loomis and Doolittle. The practical instruction embraces the use

(1) Of the Theodolite or Surveyor's Transit, for determining time, latitude, and azimuth ;

(2) Of the Sextant and Reflecting Circle for time, latitude, and longitude ;

(3) Of the combined Portable Transit instrument and Zenith Telescope for time, latitude by Talcott's and other methods, longitude by moon culminations, etc. The instrument used is of three-feet focus and 2.6 inches aperture, with fine alidade level and position filar micrometer.

(4) The Meridian Circle (with five-foot telescope) is also available for transit and other observations, as well as the Clark Equatorial of nine inches aperture, and a five-foot portable telescope by Clark, for occultations and other work.

Special students in Practical Astronomy are permitted to take up such branches of the subject, with the use of any of the above-mentioned instruments, as may best suit their purposes.

The time devoted to the subject will vary with the taste and purpose of each student and the time at his disposal. But for the degree of Civil Engineer, a good familiarity with the instruments named in 1, 2, and 3, as well as with the corresponding computations and practical problems, is required.

Professor JOHNSON :—*Agricultural Chemistry* ; two hours a week, through the year. This course includes the following topics : the Atmosphere, Water and Soil in their various relations to Vegetation ; Tillage ; Fertilizers ; Rotation of Crops ; Irrigation.

Professor C. B. RICHARDS :—*Mechanical Engineering*. This course, arranged for candidates for the degree of Mechanical (or Dynamical) Engineer, is also open to Special Graduate Students, who will be allowed in certain cases to take selected parts. The leading topics are :

(1) *Applied Mechanics* ; including graphical methods in applied kinematics, and in the investigation of mechanisms working with friction ; graphical determinations of the accelerations of the moving parts of machines ; the strength of materials as affecting the proportions of machine elements ; the applications of the principles of hydraulics to the construction and working of turbines and pumps.

(2) *Thermo-dynamics* ; applications to the compound steam engine, air compressors and compressed air motors, engines worked by volatile vapors, refrigerating machines, the warming and ventilation of buildings.

(3) *Machine Design* ; in this course the student is engaged in practical exercises under the guidance of the professor in charge, investigating machinery, and designing and making working drawings, specifications, and estimations for machines and manufacturing plant. In addition to the study of machines in general, either of the following subjects will at the option of the student receive particular attention ; (a)

Marine Engineering ; (b) Railway machinery ; (c) Pumping machinery and plant ; (d) Machinery and plant for manufacturing. The student is required to make complete drawings, from new designs, of at least one important piece of machinery under one of these subjects. A compound marine engine and boilers, a locomotive, a turbine, driving centrifugal pumps, a blowing-engine for an iron furnace, are examples.

Candidates for the degree of Mechanical Engineer are required to take also a selected course in Mathematics, to sustain a final examination, and to present a satisfactory thesis on a subject approved by the professor in charge of the course.

A course in applied electricity, and, when the facilities in the physical laboratory permit, a course of laboratory work under the superintendence of the professor in charge ; also, lectures on Industrial Legislation and Finance, and lectures on the higher Mathematics, are open to all students in this course.

Professor DuBois:—Civil Engineering. This course offers instruction for advanced graduate students, as well as for those students who may be regular candidates for the degree of Civil Engineer. It embraces the following topics :

(1) *Mechanics applied to Engineering* ; including a course in Hydraulics, with reference to the various problems which arise in connection with water-supply, water-power, or irrigation ; the efflux of water, flow through orifices and mouthpieces and over weirs, simple and submerged ; questions of overflow and land damage ; the effect of friction, contraction, enlargement, bends, valves, etc. ; measurements of the discharge of pipes, rivers, and streams ; the theory and design of water-motors ; a course in Thermo-dynamics and its practical application to hot-air, gas and steam engines, and the heating and ventilation of buildings.

(2) *Surveys and Geodesy* ; including methods of observation, base measurements, triangulation field work, theory of least squares, adjustment of observations, calculation of the triangulation, and computation of geodetic latitudes, longitudes, and azimuths.

(3) *Construction and Design* ; including the strength and properties of materials, construction and design of bridges, roofs, foundations, retaining walls, dams and embankments, masonry, arches, sewerage and drainage, improvement of rivers and harbors, specifications and contracts, and the preparations of designs and working drawings.

Candidates for the degree of Civil Engineer are required to take, in addition, a selected course in Mathematics, Practical Astronomy, and when the facilities in the physical laboratory permit, a course of laboratory work, under the superintendence of the professors in charge. They are also required to sustain a final examination, and to present

a satisfactory thesis accompanied by appropriate designs, upon a subject approved by the professor in charge of the course.

To special students, not candidates for the degree of Civil Engineer, a selection of special topics is allowed. The lectures of the Department upon Railroad Administration, Industrial Legislation and Finance, and upon the higher Mathematics are open to all the students in this course.

VIII. FINE ARTS

For the instruction offered in the Fine Arts, see page 116.

SCHOOL OF THE FINE ARTS

COUNCIL

The Council of the School consists of the President of the University, the permanent officers of the School, and four members by election: Donald G. Mitchell, LL.D., Edward E. Salisbury, LL.D., J. Davenport Wheeler, Ph.B., and William W. Farnam, M.A.

FACULTY

Rev. TIMOTHY DWIGHT, D.D., LL.D., PRESIDENT

JOHN F. WEIR, N.A., M.A., *Director, and Professor of Painting*

Rev. JAMES M. HOPPIN, D.D., *Professor of the History of Art*

JOHN H. NIEMEYER, M.A., *Professor of Drawing*

FREDERIC R. HONEY, Ph.B., *Instructor in Perspective*

JOHN P. C. FOSTER, M.D., *Instructor in Anatomy*

_____, *Instructor in Architecture*

ROBERT F. BRAINERD, *Librarian*

ORGANIZATION AND COURSE OF STUDY

The School aims to provide thorough technical instruction in the Arts of Design, viz: Drawing, Painting, Sculpture, Architecture, and Copperplate Etching; and to afford a knowledge of such branches of learning as relate to the Philosophy, History, and Criticism of Art. As a professional School of Art it aims to furnish a thorough course of study in the practice of the studios; and as a department of the University it aims to provide instruction in Art as a constituent part of the scheme of general culture. These departments, of Practice and Criticism, may be regarded as distinct or correlative.

THE TECHNICAL COURSE

The technical instruction, for professional students, is based upon methods well adapted to discipline the aesthetic faculties and ground the pupil in the elements, or fundamental principles, which constitute the grammar of Art, as a foundation for all forms of special application. This instruction is arranged as follows :

IN DRAWING, the work is distributed over a three years' course. During the first year the practice of the studio is confined to drawing from the "Antique"—from plaster casts ; during the second year, to drawing from casts and the living model ; and during the third year, to drawing from the living model—nude and draped. The classes under the supervision of the Instructor in this department are the antique portrait, nude-model, sketching, and composition classes ; and until the Chairs of Sculpture and Copper-plate Etching are filled, these branches are included under the same supervision. Students showing the requisite proficiency in any class, will be advanced to the work of the second or third year according to individual ability. Instruction in this department precedes all special courses in the various branches of Art ; no pupil is allowed to enter any of the advanced classes without this necessary qualification in that degree of proficiency which is deemed essential as a preliminary ground for such studies. Lectures on the principles of decoration, as applied in the various branches of Decorative Art, are included in this department ; and a special course in "free-hand drawing" is arranged to meet the requirements of students in the Sheffield Scientific School, extending through the first term of the year.

IN ANATOMY, instruction is given in the form of lectures, and by drawings made from specimens and casts. The lectures are divided into two courses, for elementary and advanced classes. Each course consists of twenty lectures, one lecture a week to each class, continuing through the Winter and Spring Terms. The elementary course is devoted to the study of such portions of the human body as manifestly affect the external forms, the aim being to familiarize the pupil with the characteristics of those parts, independently of their combined action in modifying the external forms. Drawings of these parts are made by the pupils, in connection with the subjects discussed by the lecturer. The advanced course includes the whole structure of the human form in its plastic anatomy and mechanism. The skeleton and muscular system are viewed as a whole, and the modification of the external forms studied in action and repose. The subjects of proportion, equilibrium and motion, and expression, are studied, and original drawings

required in illustration, made from life, or from Greek sculptures, by reducing the same to their anatomical structure by the imagined removal of the integument.

IN PERSPECTIVE, the instruction is likewise given in the form of lectures, divided into two courses of twenty lectures each, for an elementary and an advanced class, illustrated by examples drawn on the black-board, illustrating the principles under discussion. The lectures are supplemented by practical exercises. The student is required to work out examples in the interim between the lectures. The elementary course includes the principles of plane geometry underlying perspective,—simple projections, or plan and elevation drawings. Objects are treated with reference to their true dimensions, as preliminary to their correct representation on a flat surface, as seen in perspective, at various distances, and from different points of view. The advanced course includes the study of shadows and reflections, and the application of the general principles of perspective to interior and exterior views. The pupil is required to work out problems in illustration of all the principles involved in linear perspective in its application to the various branches of art.

IN PAINTING, the work is divided into an elementary and an advanced course of study. The first studies are devoted to the acquisition of a knowledge of the elements of technical practice, by painting from still-life. When the pupil has acquired some knowledge of the means in representing objects in color, as to their values and relations, the remainder of the course is given to studies of the living model, in portrait, figure, and composition. This is continued while the pupil remains in the School. The course in painting implies, on the part of the pupil, a requisite knowledge of drawing, and drawing from the living model is continued throughout the course in connection with the work in color. The practice of the studio is supplemented by illustrated lectures on Color, Chiaroscuro, Composition, and such other special topics as relate to the principles and means of Art, or are comprehended in its theory and practice.

IN MODELING, a course is provided, including the anatomical lectures, and drawing. The work in this branch of instruction consists in first modeling in clay, from casts of Greek fragments, the head and other extremities of the human form, and then the whole figure. When the student has sufficient command of the method and means, the rest of the course is devoted to modeling from the living subject.

IN ARCHITECTURE, the course includes drawing, as provided in that special department in its elementary instruction, as well as the course in isometric projection and perspective. Under the instructor in Architecture, studies are made from notable examples of the various orders

and styles, in chronological order, with original projects in illustration to be worked out by the student. The means and methods of preparing plans, elevations, sectional and working drawings, and perspective views in India-ink and water-color, are comprehended in the elementary part of this course. Arrangements may be made with other departments of the University, by which students in Architecture can obtain the requisite instruction in mathematical subjects having a direct bearing on this art, including plane geometry, stone-cutting, the nature and strength of materials, and the principles of construction and engineering.

Under the instructor in Architecture the course includes a general and comprehensive view of the historic development of the various architectures, with a comparative analysis of the same with respect to their principles of construction and decoration.

IN COPPER-PLATE ETCHING, a course is provided, and a room set apart for this special study, containing all the necessary appliances of this art, including a press. The instruction in this branch of art is, for the present, in charge of the Professor of Drawing.

COURSE IN THE HISTORY AND CRITICISM OF ART

The instruction in this department includes courses of lectures by the various Instructors of the School, arranged to include both professional students in regular course, and classes from other departments of the University where it is recognized as an "elective" study.

IN THE HISTORY OF ART, the course is as follows: 1. *The Origin of the Art* principle—Hegel, Lotze, Ruskin; 2. *Egyptian Art*—Perrot and Chipiez, "*Histoire de l'Art de l'Antiquité*," etc.; 3. *Oriental Art*, with special reference to its influence on Greek Art—Schnaase, Fergusson, Perrot and Chipiez, etc.; 4. *Greek Art*, Principles of Greek Art; Pelasgic construction, and the three orders of Greek Architecture; Greek Sculpture, including the Archaic, Phidian, and Naturalistic periods, and the Graeco-Roman; with recent researches at Olympia and other places; *Greek Painting*, Ceramic, Mosaic, and Mural—Winckelmann, Lessing, Ottfried Müller, J. Overbeck, Schnaase, Friedrichs, Charles Blanc, and Woltmann; 5. *Roman Art*, Fergusson, Dennis, Emil Braun, etc.; 6. *Beginnings of Christian Art*, classic sources and types; Religious Art; early Christian Painting and Iconography; early Christian Architecture—Lindsay, Fergusson, etc.; 7. *Byzantine Art*, Oriental, Christian, and Saracenic forms—Fergusson, Ruskin, etc.; 8. *Mediaeval Art*, Romanesque and Lombardic; Tuscan, Southern and Northern Gothic—Viollet-Le-Duc, Ruskin, Fergusson, etc.; 9. *The Renaissance*; rise of the Florentine School, and the Schools of Sienna, Umbria, Lombardy, Rome, and Venice

—Vasari, Lanzi, Kugler, Ruskin, Crowe and Cavalcaselle, Symonds, etc.; 10. *Modern Art*—Schools of Spain, Holland, Germany, France, and England; the Pre-Raphaelite, Romantic, and Impressionist movements; Art in America. The lectures are illustrated by means of the hydro-oxygen lantern.

IN THE PRINCIPLES AND MEANS OF ART, a course of twelve lectures is provided, fully illustrated, embracing the subjects of Line, Chiaroscuro, Color, Composition, and Expression,—following the path of the artist in his work. A course of twelve lectures discussing the technical methods of the Painter, the Sculptor, the Architect, and the Engraver, including an historic account of the technical development of these arts, is also provided.

The regular prescribed course of study, for professional students, covers a period of three years, but pupils are encouraged to remain in the School and pursue advanced studies after the expiration of the prescribed term. The fees are at the rate of twelve dollars per month, with an annual fee of five dollars. No pupil is received for a term of less than three months. The tuition fee for a fourth year's attendance is one-half the usual rate; pupils remaining for a longer period are classed as "honorary students"; as such they are exempt from the payment of a tuition fee, but are charged an annual fee of ten dollars. The School is open to both sexes; no pupil is received under fifteen years of age. All applications for admission should be made through the Director. The School opens on the 1st of October, and closes on the 1st of June. At the end of the School-year an exhibition of the work of the various classes of pupils is held, continuing open through the summer months. The closing exercises are held on the 1st of June.

CERTIFICATES are awarded to pupils remaining in the School through the regular course of three years; and a DIPLOMA is awarded, on the ground of merit alone, to such students as fulfill all the requirements of a prescribed course of advanced studies in the several departments of instruction.

The "ETHEL CHILDE WALKER PRIZE," the income from a foundation of two hundred dollars, is awarded annually, under certain restrictions, to the most deserving pupil in the professional department.

THE ART LIBRARY, containing a collection of technical hand-books, current art-periodicals, and portfolios of engravings, is open, during specified hours, for the use of students. The pupils of the School are entitled to the use of the University Library, and to such other privileges, under the usual restrictions, as are granted to students in the other Departments.

Season-tickets, at fifty cents each, admitting the holder to the Galleries and Exhibitions throughout the year, are furnished to the undergraduates of all Departments of the University.

THE COLLECTIONS embrace "The Jarves Gallery of Italian Art," numbering one hundred and twenty-two paintings dating from the 11th to the 17th centuries; the "Trumbull Gallery" of historical portraits and other works, numbering fifty-four pictures; a collection of contemporaneous art, numbering about one hundred paintings; a collection of about one hundred and fifty casts and marbles, representative of the various periods of Greek and Renaissance Art; a valuable collection of Chinese porcelains and bronzes, loaned by Mr. F. W. Williams; and a series of very valuable Belgian wood-carvings of the 16th century, deposited in the School by Mrs. A. C. Alden. The Collections are open daily for the use of students; and to the public, during the winter, from 1 to 5 P. M., and during the summer from 9 A. M. to 6 P. M.

The Art Building was erected in 1864, by Mr. Augustus R. Street (Yale College 1812), of New Haven, at a cost of about \$220,000. The School was partially endowed, to the extent of \$81,500, by Mrs. Street, who also made other gifts in aid of its objects.

DEPARTMENT OF THEOLOGY

(YALE DIVINITY SCHOOL)

FACULTY

- REV. TIMOTHY DWIGHT, D.D., LL.D., PRESIDENT
REV. GEORGE E. DAY, D.D., *Professor of the Hebrew Language and Literature and Biblical Theology (Old Testament), and Dean*
REV. SAMUEL HARRIS, D.D., LL.D., *Professor of Systematic Theology*
REV. GEORGE P. FISHER, D.D., LL.D., *Professor of Ecclesiastical History*
REV. LEWIS O. BRASTOW, D.D., *Professor of Homiletics and the Pastoral Charge*
REV. JOHN E. RUSSELL, M.A., B.D., *Professor of Biblical Theology (New Testament)*
REV. GEORGE B. STEVENS, PH.D., D.D., *Professor of New Testament Criticism and Interpretation*
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- MARK BAILEY, M.A., *Instructor in Elocution*
GOTTLIEB HENESS, M.A., *Instructor in German*
WILLIAM R. HARPER, PH.D. (*Professor of the Semitic Languages*), *Instructor in Hebrew*

SPECIAL LECTURERS

- REV. JOHN A. BROADUS, D.D., LYMAN BEECHER LECTURER *on Preaching and the Ministerial Life*
REV. JOHN HALL, D.D., LL.D., *on Divine Truth for all Conditions of Men*
GEN. SAMUEL C. ARMSTRONG, *on the Christian Education of the Colored and Indian Races*
LEONARD J. SANFORD, M.D., *on the Preservation of Health*
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The annual term of study, commencing on Thursday, September 20th, 1888, will continue until the third Wednesday in May, 1889, when the Anniversary and the Annual Meeting of the Alumni will be held. The next term will open on Thursday, September 19th, 1889. The School is open, on equal terms, to students of every Christian denomination. Blank forms of application may be obtained by addressing the Dean of the Faculty, Professor George E. Day, or any of the other Professors.

CONDITIONS OF ADMISSION

The conditions of admission are membership in some evangelical Church, or other satisfactory evidence of Christian character, and a liberal education at some College or University, or, in exceptional cases, an equivalent preparation for theological studies. Students of every Christian denomination, in case they are possessed of these qualifications, are admitted.

It is expected that every student will be promptly on the ground at the beginning of the session. Rooms are assigned in the order of application, but no room is reserved for any applicant who neglects to appear, beyond one week after the opening of the term.

COURSE OF STUDY

The regular Course of Instruction occupies three years, and is arranged in the following order :

JUNIOR YEAR :

Professor DAY will lecture once a week on the Encyclopedia and Literature of Theology, including a survey of the various branches of Biblical Literature, and an account, more or less extended, of the prominent writers and their works in the several departments of theological science.

Professor HARPER will give instruction in the grammatical principles of the Hebrew language in connection with the first eight chapters of Genesis ; translation of these chapters from English into Hebrew and the acquisition of a vocabulary in the ground covered in his *Introductory Hebrew Method*, with a survey of the Pentateuchal criticism ; rapid reading of Exodus i-xx, and Deuteronomy ; translation at sight of the First Book of Samuel and a critical reading of Genesis xlix, Exodus xv, and Deuteronomy xxxii, xxxiii : Hebrew Syntax. Provision will also be made for the instruction of an advanced class in Hebrew.

Professor STEVENS will lecture four times a week on the Synoptic Gospels. The work will be conducted on the basis of Mark, but the parallel passages will also be read in the class and critically examined. It is designed to make this course a thorough study of the Life of Christ, with special reference to the successive stages of his teaching. Recitations will also be held in connection with the lectures, in which the members of the class will be examined upon the passages read. Dur-

ing a portion of the year lectures will be given on the General Introduction to the New Testament, including the principles of Textual Criticism, and on Special Introduction to the Synoptic Gospels, including the problems of their origin and relation. Essays on themes connected with critical New Testament study will be presented by the students and discussed in the presence of the class.

President DWIGHT will lecture twice a week on the first Epistle to the Corinthians or one of the other Epistles of Paul.

Professor HARRIS will lecture twice a week on the Philosophical Basis of Theism, and the Self-Revelation of God.

Professor FISHER will deliver a short series of lectures during the latter part of the term on Ancient History.

MIDDLE YEAR :

Professor HARRIS will lecture five time a week on Systematic Theology. This course will include a full and systematic investigation of the doctrines of Christianity, and of existing questions and controversies concerning them. The subjects will be treated in the following order : The Attributes of God ; The Trinity ; God the Creator, and his End in Creation ; God's Providential Government ; God's Moral Government ; Sin ; Redemption—the Atonement, Regeneration, Justification by Faith, the Spiritual Life ; the Kingdom of Christ on Earth, its Progress and Triumph ; Eschatology. Examinations on the topics discussed will be connected with the lectures, and entire freedom of question and discussion at every lecture is invited.

Professor DAY will give instruction twice a week in Old Testament Biblical Theology, as connected with the History and Religious Institutions of the people of Israel, Prophecy, and the Wisdom of the Hebrews. He will also give instruction in Biblical Aramaic to such members of the class as may desire it.

Professor HARPER will read with the class twice a week selections from the prophetic literature with particular reference to the principles of prophecy. The prophecies studied during the current year are those of Joel, Obadiah, and Hosea. Special attention is given to the subject of Hebrew Syntax.

Professor FISHER will give instruction three times a week on General Church History, embracing specially the branches of the subject which are not included under the History of Doctrine. They comprise the following topics : The Nature, Divisions, and Sources of Church History, with a Review of the Literature on the subject ; the Old or Preparatory Dispensation in its relation to Christianity ; the condition of the Graeco-Roman World at the Introduction of the Gospel ; the Establishment of Christianity, and the Conflicts of the Apostolic Age ; the spread of Christianity, including especially the Conversion of the

Roman Empire and of the Teutonic Nations ; the Changes in Ecclesiastical Polity in the Early Centuries ; the Organization of Latin Christianity under the Papacy ; the relations of the Papacy and the Church to Civil Society in the Middle Ages ; the Protestant Reformation, with its Causes and the Systems of Polity adopted by the different Protestant Churches ; Christian Life, and its Characteristic Features in the Successive Eras (including the Rise and Subsequent History of Monasticism) ; the History of Christian Worship.

Professor STEVENS will lecture twice a week on parts of the New Testament, selected with special reference to exhibiting the form and contents of the Apostolic teaching. The subjects for the current year are : The Apostolic Discourses in the Acts, and the Epistle to the Galatians.

Professor BRASTOW will give instruction twice a week, by lectures and critical exercises, in the principles of Rhetoric as applied to the work of Christian preaching, with special reference to the cultivation of an appropriate pulpit style.

SENIOR YEAR :

Professor BRASTOW will give instruction four times a week, by lectures and critical exercises, in different branches of Practical Theology, as follows. He will lecture once a week on Homiletics, and once a week will conduct a class exercise in the criticism of sermons and plans of sermons. It is proposed to make these practical exercises a prominent feature in the course. He will, also, give private instruction, at least twice during the year, to each member of the class in connection with the criticism of sermons, and will give personal aid in the study of Homiletical and General Literature. He will lecture twice a week upon Pastoral Theology, including the calling, training, and personal and official duties of the Christian ministry, with special reference to the leadership of the church in its various practical activities as connected with the interests of the Kingdom of God. He will also conduct class discussions of questions of practical interest relating to the work of the church.

Professor FISHER will lecture three times a week, through the year, on the History of Christian Doctrine and on Symbolical Theology. The course includes an explanation of the Origin of Theology as a Science, and a Discussion of True and False Theories of the Development of Doctrine ; a Survey of the Influence of Philosophy on Theology in the Successive Eras ; a Review of Authors in the field of Theological Literature ; a History of Theological Thought in the Church, in relation to the several Doctrines of the Christian system, down to the present time ; an account of the Comparative Tenets of the different religious bodies into which Christendom is divided.

Professor RUSSELL will give instruction three times a week in the Biblical Theology of the New Testament. It is the aim of this department to investigate the teaching of the New Testament in the character and historical connection in which that teaching is found in the writings of the New Testament. The lectures embrace the following topics: Biblical Theology as a science, and its relation to other branches of Theology; the principal forms of teaching exhibited in the New Testament; their differences and relationship; the historic connection of New Testament Theology with the Religion of the Old Testament and with the religious ideas of the later Judaism.

Professor DAY will lecture once a week on portions of the prophetic books of the Old Testament, and will read with those who wish to prosecute the study of Syriac, the Peshito version of the New Testament.

Professor STEVENS will read with the class once a week the Epistles of Paul to the Corinthians, with discussion of their relation to the Apostle's life and labors, and of the principles which he applies to practical moral questions.

GRADUATE OR FOURTH YEAR CLASS

Into this class, which was established in 1879, only those who have completed a three years' course in this or some other Theological School can be admitted. It is designed to meet the wants of those who desire to pursue an advanced course of general theological study, or to apply themselves to special subjects of reading or investigation in any of the departments of theology, for one year or more, under the advice and direction of the Professors and with the help furnished by the Reference and University libraries.

For the year 1888-89, the following are the subjects, selected after conference between them and the Professors, to which the whole class, or portions of it, attend. Individual members of the class pursue other branches of theological study by private arrangement with the Professors.

I. EX-PRESIDENT PORTER: Special Topics in Philosophy and Philosophical Theology.

II. PROFESSOR DAY: Cheyne's Commentary on the Psalms, read and discussed.

III. PROFESSOR HARRIS: Reading of Dorner's System of Christian Doctrine.

IV. PROFESSOR FISHER: Weiss's Life of Jesus, read and discussed.

V. PROFESSOR BRASTOW: Schools of Preaching and the History of Preaching; with critical exercises and discussions.

VI. PROFESSOR RUSSELL: Philosophy of Religion.

VII. PROFESSOR STEVENS: Studies in the Life and Letters of the Apostle Paul.

For the year 1889-90, similar courses, or others which may be determined upon in consultation with the Professors and may be desired by the students, will be pursued. Students will also be aided in their private reading and investigations by the Professors.

Members of the Graduate Class are expected to express the purpose of continuing at the Seminary during the entire term. They will be furnished with rooms free of rent, and no charge will be made for instruction or the use of libraries.

OPTIONAL STUDIES IN EITHER YEAR:

Professor HARPER will admit students who desire to pursue the study of Arabic or Assyrian into his graduate class, free of charge.

Professor DAY will read with those students who desire to become familiar with the theological literature of Germany and have made sufficient progress in the language, some standard treatise in German on Christian doctrine, with critical remarks and references to the ablest works on special topics. The work selected for the present year is Dr. Julius Müller's *Christliche Lehre von der Sünde*.

Professor WHITNEY will give instruction to those who desire it, in Sanskrit.

Dr. HENESS will give instruction, free of charge, to students who wish to learn to speak German.

Instruction in Vocal Music will be given during a portion of the year to students who desire it, by Dr. STOECKEL, the Instructor in Music in the University.

Professor LADD's University Course on Psychology, Metaphysics, the Theory of Cognition, and the Philosophy of Religion, is particularly intended to meet the wants of Theological Students. A select number of advanced pupils in Philosophy will also be admitted to the Course in Lotze's *Microcosmus*.

The members of the Divinity School, on conditions prescribed by the Faculty, are also allowed to attend, free of expense, any of the lectures in the COLLEGE, and also in the SHEFFIELD SCIENTIFIC SCHOOL, many of

which are on subjects of special importance to pastors. These lectures are on the following subjects: *Moral Philosophy*, by Ex-President PORTER; *Intellectual Philosophy*, by Professor LADD; *History*, by Professor WHEELER; *Evolution and Cosmogony*, by Professor DANA; *Language*, by Professor WHITNEY; *Physical Geography*, by Professor BREWER; *Agricultural Chemistry*, by Professor JOHNSON; *Practical Agriculture*, by Professor BREWER; *Botany*, by Professor EATON; *Zoology and Entomology*, by Professor VERRILL.

Those who intend to become Foreign Missionaries have the further privilege of attending the lectures in the Medical School, on the payment of the matriculation fee of five dollars.

These opportunities for obtaining wider culture will be of special value to graduates of colleges and others who desire the means of pursuing studies to which they have not attended, or in which they seek further instruction.

ELOCUTION :

A thorough course of instruction in Elocution is given to the students, which is progressive in its character and extends through the three years of study for each class.

To the Junior Class a full course of lectures is given on the principles of logical and emotional analysis and expression, and on oratorical action and vocal culture. This is followed by individual practice in speaking and reading.

In the Middle year is added extended and frequent special practice in Scripture and hymn reading and in the reading and delivery of sermons.

To the Senior Class the instruction is given mainly in private lessons, and is designed to meet, so far as possible, the special needs of each individual in his preparation for the duties of the preacher's office.

EXERCISES IN PUBLIC SPEAKING :

There will be an exercise for all the classes in the MARQUAND CHAPEL, under the direction of Professor BRASTOW and in the presence of the Faculty, once in two weeks, in the reading of the Scriptures and hymns, and in the delivery of sermons, or parts of sermons or addresses. Every alternate week there will be an exercise, designed to cultivate the power of the students in *extemporaneous speaking*, by the discussion of subjects of practical importance. Weekly debates are also held by the students in societies of their own.

LICENSE TO PREACH

The regular time for applying for license is at the close of the second year's study, before which time the members of the School are not allowed to preach.

PUBLIC WORSHIP

Prayers, with reading of the Scriptures and singing, are attended every morning in the MARQUAND Chapel. It is optional with each student whether to attend worship on the Lord's day in the College Chapel, or in one of the City Churches; but whatever may be his decision, it is hoped that he will engage, so far as may not be inconsistent with the prosecution of his studies, in some form of City Mission, Sabbath School, or other benevolent labor, for which constant opportunities are offered.

DEGREE

The Degree of Bachelor of Divinity is conferred on all members of the School who at the end of the Senior year pass the prescribed examination, and present an approved thesis on some topic of theology.

LIBRARIES

The *University Library*, containing about 140,000 volumes in the various departments of literature and science, is especially rich in its theological part, and stands in this respect among the first libraries in the country. It is open seven hours on every secular day for consultation and for the drawing of books. The Divinity students in common with the other members of the University have access to it without charge.

For a fuller notice of the advantages offered in this direction, the account of the Library on a later page of the Catalogue, may be consulted.

The *Reference Library* of the Divinity School, established by the late Henry Trowbridge, Esq., of New Haven, and now placed in the Bacon Memorial Hall erected in 1882 by

the late Frederick Marquand, Esq., as a memorial of the late Rev. Leonard Bacon, D.D., is open for consultation during several hours of the day. It contains nearly 3,000 carefully selected volumes, in every department of theological literature, and is designed to take the place, for each student, of a large and well selected private library. The latest books and periodicals are constantly added to it as they appear.

The valuable *Library of Church Music* belonging to the late Dr. Lowell Mason, was given to the Seminary by his family. This library, which is one of the largest of its kind in the country, is placed in one of the rooms in the West Divinity Hall.

The united Libraries of the College Literary Societies, containing 30,000 volumes in general literature, are accessible to theological students.

The total number of volumes in the several libraries, which are open to students, is about 175,000.

PHYSICAL EXERCISE

The College Gymnasium is open to the students of this Department at a small charge.

DIVINITY HALLS

The East Divinity Hall, which was erected in 1870, contains in addition to the Lecture Rooms for the three classes and rooms for the Professors, accommodations for about sixty students. The West Divinity Hall (parallel with the other building and adjacent to it) was erected in 1874, and has, in addition to the room containing the Lowell Mason Library, accommodations for ninety students. The rooms in these buildings are warmed by steam, and lighted by gas, and are provided with all necessary furniture, except bed-clothes, which may be brought by the occupants, or will be furnished at a moderate charge by the Janitor. The

assignment of rooms to new students is made in the order of their application. A number of the rooms are designed for two students, but, so far as practicable, single rooms will be assigned to applicants for admission who desire to room alone.

EXPENSES AND PECUNIARY AID

Students have only to make pecuniary provision for about eight months of study annually. In the four months of vacation, from May to September, they have the opportunity to engage in Home Missionary or other labor, with remuneration for their services.

The expenses for the annual session of 35 weeks are \$10 for each student for care of room and other incidental expenses; \$25 to \$30 for fuel and lights, or one-half of this sum in case two students occupy the same room. No charge is made for instruction or room rent, or for the use of Libraries.

The expense for board will be from \$3.25 to \$3.50 a week, at which prices most of the students have obtained good board during the past year.

Students in the Junior, Middle, and Senior Classes, whose circumstances require it, will receive \$100 a year from the income of Scholarships and other funds belonging to the School. Additional aid to the amount of \$75 annually is offered by the American College and Education Society to its beneficiaries. These means of assistance cover all the expenses mentioned above.

The Scholarships belonging to the Department bear respectively the names of James Hillhouse, William Leffingwell, George E. Dunham, Normand Smith, E. E. Salisbury, Thomas R. Trowbridge, Charles Atwater, Richard Borden, Susan B. Dwight, Samuel Holmes, Charles Nichols, Noah Porter, John DeForest, James Dwight, J. B. Beadle, David Root, Rebecca Breed, Mary Goodman, Orin Fowler, Edward Bull, W. W. Seymour, William S. Eakin, Cassius Welles and Robert McEwen.

After the close of the second year in May, students have opportunities to receive remuneration for preaching in the neighboring churches.

In general, it may be said that the aid which is provided for every young man, of any evangelical denomination, who gives promise of usefulness in the ministry, is sufficient, in connection with his own efforts, to enable him to complete a course of theological study.

GRADUATE FELLOWSHIPS

A Graduate Scholarship or Fellowship was established in this Department, in 1876, as a memorial of the late Mrs. Aurelia D. Hooker, of New Haven. It is assigned at graduation to that member of the class to which it is offered who, having been connected with the School through the entire course and being of approved Christian character, has, in the judgment of the Faculty, made such proficiency in theological studies as best to qualify him for the advantages offered by this foundation for the further prosecution of the same. The person to whom the scholarship is given receives the annual income (\$700) for two years after graduation, and is expected to pursue a course of theological study under the direction of the Faculty, either as a resident at the School, or, in case he may prefer to do so, in Europe or Palestine. The HOOKER FELLOWSHIP was offered to the class which entered the Divinity School in September, 1886, and also to the class which entered in September, 1888.

A SIMILAR GRADUATE SCHOLARSHIP yielding \$500, and affording to the student who shall receive it the same privileges for one year after graduation, was offered on the same conditions, to the class which entered the School in September, 1887, and is also offered to the class entering in September, 1889.

DEPARTMENT OF MEDICINE

(YALE MEDICAL SCHOOL)

FACULTY

REV. TIMOTHY DWIGHT, D.D., LL.D., PRESIDENT
MOSES C. WHITE, M.D., *Professor of Pathology*
CHARLES A. LINDSLEY, M.D., *Professor of Theory and Practice of Medicine*
WILLIAM H. CARMALT, M.D., *Professor of Surgery*
JAMES K. THACHER, M.D., *Professor of Physiology and Clinical Medicine*
FRANK E. BECKWITH, M.D., *Professor of Clinical Gynaecology*
JAMES CAMPBELL, M.D., *Professor of Obstetrics and Diseases of Women and Children*
THOMAS H. RUSSELL, M.D., *Professor of Materia Medica and Therapeutics*
SAMUEL W. WILLISTON, M.D., *Professor of Anatomy*
HERBERT E. SMITH, M.D., *Professor of Chemistry, and Dean*

OTHER INSTRUCTORS

WILLIAM H. BREWER, PH.D., *Lecturer on Sanitary Science and Public Health*
HENRY P. STEARNS, M.D., *Lecturer on Insanity*
SAMUEL B. ST. JOHN, M.D., *Lecturer on Ophthalmology*
HENRY FLEISCHNER, M.D., *Lecturer on Dermatology and Clinical Medicine*
FRANK H. WHEELER, M.D., *Assistant in Pathology*
CHARLES E. PARK, M.D., *Assistant in the Surgical Clinic*
WILLIAM E. LOCKWOOD, M.D., *Assistant in Physiology*
HENRY L. SWAIN, M.D., *Lecturer on Diseases of Throat and Ear, and Demonstrator of Anatomy*
OLIVER T. OSBORNE, M.D., *Assistant in the Medical Clinic*
THOMAS G. LEE, M.D., *Lecturer on Histology and Bacteriology*

In the fall of 1810 a charter was granted to the President and Fellows of Yale College and the President and Fellows of the Connecticut Medical Society, authorizing them to unite according to the terms of certain "Articles of Union,"

before agreed upon, for the establishment of a medical seminary, to be styled the Medical Institution of Yale College. Two years later the School was organized, and in the fall of 1813 instruction was begun. The Faculty consisted of four professors, appointed by the College Corporation from nominations by the Medical Society. Degrees were conferred by the College on the recommendation of the board of examiners, consisting of the members of the Faculty and an equal number appointed by the Medical Society. The instruction consisted of didactic and clinical lectures and dissections during the short winter course. Later, instruction was given during the spring months also, and from time to time the number of instructors was increased.

That this dual nature of the School and the method of instruction were wisely planned is shown by the position which the School took at once in the medical instruction of the time. But changes were gradually taking place in the relations between practitioners and students of medicine, and even greater changes in medicine itself, which seemed to demand a different kind of instruction. This School responded early to this demand, and in 1879 an entrance examination was imposed and a graded course extending over three full years and including considerable laboratory instruction was adopted. In 1884, by an agreement with the Medical Society, the College authorities assumed the entire control of the School.

In reorganizing the School as an integral part of the University, the inherent defects in the older and still common method of instructing chiefly by didactic lectures, were recognized, and the methods now employed are similar to those in vogue in the other Departments. Didactic lectures are still employed as best in some branches, but recitations from assigned readings, with explanatory lectures, laboratory work, and personal instruction in the clinics, constitute the main portion of the curriculum. The School has well equipped laboratories for the study of anatomy, histology, chemistry, physiology, and pathology, and the student spends much of his time in them during the first two years.

In the second year he begins the practical branches of medicine, to which he devotes the third year. While the attention of the student is particularly directed to those branches which can be studied to advantage only in a well equipped medical school, the value of clinical instruction is fully appreciated, and amply provided for. The details of the course of instruction are given below.

TERMS OF ADMISSION

Candidates for admission to the course leading to the degree of Doctor of Medicine, must be at least eighteen years old, and must present satisfactory testimonials of moral character from former instructors or physicians in good standing.

As evidence that he has had a sufficient preliminary education, each candidate must present proof that he has passed the matriculation examination of some scientific, literary, or professional college in good standing ; or present testimonials from the proper officer that he has pursued the course at some high school, academy, or preparatory school, approved by the Faculty ; or he must pass an examination in the following subjects :

1. MATHEMATICS: Algebra, to Quadratics ; Geometry, Euclid, two books or its equivalent ; Metric system of Weights and Measures.
2. PHYSICS: Balfour Stewart's Elementary Physics, or some equivalent work.

These examinations are conducted in writing. Grammar, spelling, and construction are considered in judging of the papers. Copies of the questions of previous examinations will be furnished on application to the Dean.

These examinations will be held at the Medical School at 9 A. M., on the Wednesday preceding the opening of the first term, and on the Thursday following Commencement.

In conjunction with other Departments, examinations will be held on the Thursday after Commencement, in Chicago, Cincinnati, and San Francisco. Particulars of

the time and place will be announced in the local papers. A fee of five dollars is charged for admission to these examinations.

Students who have studied elsewhere either in recognized medical schools or under private preceptors of good standing, may present themselves for examination three weeks before Commencement and enter the examinations of the first, or of the first and second years, according to their time of study. The results of these examinations will determine the class to which they belong.

Applicants for advanced standing who present themselves at other times of the year will be assigned to such classes as from their representations they seem to be fitted for, but at the next annual examination they will be examined in all of the studies previously passed by their class, as well as in those for the current year.

TERMS AND VACATIONS

The regular exercises of the School consist of three terms, covering thirty-four weeks, exclusive of a vacation of three weeks at Christmas and a recess in the spring, usually of one week.

The first term begins with the first Thursday of October, and continues eleven weeks. The second term begins three weeks after the close of the first, and continues twelve weeks. The third term is eleven weeks in length, ending with Commencement. (See Calendar, p. 6.)

COURSE OF INSTRUCTION

JUNIOR YEAR ;

Chemistry : Illustrated Lectures and Recitations, 4 hours, Professor Smith. Chemical Laboratory, 8 hours, Professor Smith and Mr. Baldwin.

Anatomy : Lectures and Recitations, 3 hours, Professor Williston. *Osteology and Syndermology*, Laboratory work and Recitations, 2 hours, Professor Williston. *Dissections*, four times a week from November 1 to April 1, Dr. Swain. *Autopsies*, Professor White.

Histology: Laboratory work, 2 hours, Lectures, and Recitations, 2 hours, Dr. Lee.

Physiology: Recitations and Demonstrations, 2 hours, Professor Thacher and Dr. Lockwood.

MIDDLE YEAR:

Anatomy: Lectures and Recitations, 3 hours, Professor Williston. Dissections, four times a week from November 1 to April 1, Dr. Swain.

Materia Medica and Therapeutics: Lectures and Recitations, 3 hours, Professor Russell.

Physiology: Lectures and Recitations, 1 hour, Professor Thacher.

Pathology: Lectures and Recitations, 1 hour, Professor White. Laboratory work, 2 hours, Professor White and Drs. Wheeler and Lee. *Autopsies*, Professor White.

Medicine: Lectures and Recitations on General Medicine, 3 hours, Professor Lindsley.

Surgery: Lectures on General Surgery, 3 hours, Professor Carmalt.

Obstetrics and Diseases of Women and Children: Lectures and Recitations, 2 hours, Professor Campbell.

Dispensary Clinics, daily. Hospital Clinics. School Clinics, five times a week. Operations at the Hospital.

SENIOR YEAR:

Pathology: Lectures and Recitations, 1 hour, Professor White. Laboratory work, 2 hours, Professor White and Drs. Wheeler and Lee. *Autopsies*, Professor White. *Bacteriology*, 1 hour, second term, Dr. Lee.

Medicine: Lectures on General Medicine, 3 hours, Professor Lindsley. School Clinic, 4 hours, Professor Thacher. Hospital Clinics, twice a week for five months, Professor Thacher and Dr. Fleischer. *Insanity*, 1 hour, for nine weeks, Dr. Stearns. *Sanitary Science*, Professor Brewer, and *Toxicology*, Professor Smith, 1 hour, first term.

Surgery: Lectures on General Surgery, 3 hours, Professor Carmalt. School Clinic, 2 hours, Professor Carmalt. Hospital Clinic, once a week for five months, Professors Carmalt and Russell. Lectures on *Ophthalmology*, 1 hour, Dr. St. John. *Ear and Throat Clinic*, 1 hour, Dr. Swain.

Obstetrics and Diseases of Women and Children: Lectures and Recitations, 2 hours, Professor Campbell. Dispensary Clinic for Diseases of Women, 2 hours, Dr. Wheeler.

Dispensary Clinics, daily. Hospital Clinics. School Clinics, five times a week. Operations at the Hospital.

CHEMISTRY—In the lectures and recitations on *General Chemistry* the students are as well grounded as is practicable on the fundamental principles of the science, on the formulation of reactions, and the solution of problems. The properties of the elements and their chief compounds are illustrated by experiments and the use of a large collection. Much attention is devoted to the study of organic compounds; the properties and theories as to the constitution of these important bodies are illustrated by specimens and by the preparation of many of the typical compounds before the class.

Qualitative Analysis is taught so far as to require each student to be able to analyze a mixture of the salts of the common metals. Each student is furnished with a desk and all required apparatus and reagents. The course is systematic and is well adapted to cultivate habits of observation and the analytical method of thought. The elements of *Quantitative Analysis* are taught, a number of typical determinations being made by volumetric and gravimetric methods.

The course in *Physiological and Medical Chemistry* consists of recitations and a practical laboratory study of the composition and reactions of the various animal tissues and fluids, the processes of metabolism and digestion, and the action of ferments. Due attention is paid to the composition of foods, the physiological use of the digestive preparations, and other matters of medical interest, especially to the recent analytical methods employed in clinical work. The study of normal urine is supplemented by abundant practice in the chemical and microscopical examination of pathological specimens.

ANATOMY—The instruction in anatomy aims at thoroughness and comprehensiveness by means of lectures, recitations, and dissections. The lectures are fully illustrated, and the topics thus presented are reviewed and supplemented by regular recitations from Gray's *Anatomy* as a text-book, thus fixing accurately the knowledge of the student. Practical work in the dissecting room, under the supervision of the Demonstrator, is required of each student. The rooms for this purpose are provided with all necessary material and appliances, and every encouragement will be given by the Professor for the pursuit of practical work, whether in human or comparative anatomy, by such students as wish to extend their studies beyond the prescribed course. Dissection forms the basis of all lasting knowledge in anatomy, and thorough work is insisted upon. The methods employed in the preservation of material are such that there is little or no danger to health from dissection wounds.

During the early part of the course, laboratory instruction in *Osteology* and *Syndesmology* is given by the Professor upon material in the hands of each student, who is provided with a box containing a full series of bones for private study. In the latter part of the course the practical

work upon the skeleton and cadaver is supplemented by a course of lectures on superficial and regional anatomy, with demonstrations and examinations upon the living subject.

Normal Histology—The course in histology consists of laboratory work with lectures and recitations. Each student is furnished with a microscope and all reagents and apparatus required for thorough work. He receives a number of sections of each tissue and organ of the body, which are carefully prepared for him in various ways, so as to illustrate fully the different points of structure, of which he makes drawings.

In addition to the study of the structure of tissues, the course includes thorough personal instruction in the technology of the subject. The student is taught practical methods of preserving specimens, of hardening, and of cutting and staining sections.

Lectures illustrated with the lantern are a special feature of the instruction, the transparencies being made from photographs of typical preparations and diagrams.

A large reference collection, abundant material, and the most recent instruments and publications, afford good facilities for advanced work.

PHYSIOLOGY—The design of the regular course of instruction in this branch may be described as essentially the impression of modern physiology on the mind of the student, on the lines and methods, and according to the measure of Dr. Foster's excellent presentation in his manual. For this purpose full experimental illustrations are given, and such other demonstrations as are of service in making the knowledge real and lasting. In the experiments the students are employed in turn as assistants, and thus acquire both an intimate knowledge of the subject and a manual skill which will be of service to them in their professional work. Informal recitations are regularly held with the design of affording the student an opportunity of asking questions, as well as of marking out for him a regular amount of private daily study.

Care is taken to call attention to the relations of physiological facts as they present themselves, to practical medicine.

Students desirous of investigating some particular subject in experimental physiology will be taken into the physiological laboratory without extra charge, furnished with the requisite apparatus, and directed in their work.

MATERIA MEDICA AND THERAPEUTICS—The instruction in this department is given by recitations chiefly. These are illustrated by the specimens from a large collection of the materia medica, though the botany, physical character, and chemical composition of drugs, receive much less attention than their physiological actions and therapeutical uses; the lectures are devoted more particularly to the elucidation of the latter subjects. A reasonable portion of time is devoted to exer-

cises in prescription writing, in both the metric and English systems. The students are required to prescribe for a large variety of hypothetical cases, calling for the administration of most of the drugs of the *materia medica*.

PATHOLOGY—The instruction in pathology consists of lectures, recitations, and laboratory work in pathological histology. The laboratory is supplied with excellent microscopes which are furnished to each student, together with all necessary apparatus and reagents for the preparation, study, and preservation of microscopical specimens of morbid tissues.

Pathological anatomy is illustrated by a large collection of specimens and drawings, with which the museum is supplied, and supplemented by fresh pathological specimens. Students are also expected to attend all the autopsies made at the Morgue of the New Haven Hospital. This large and convenient morgue was constructed with special reference to rendering autopsies available for the instruction of students.

Bacteriology—The School has a special laboratory devoted to the study of Bacteriology, which contains a fine equipment of modern apparatus, for carrying on investigations in all lines of research regarding Bacteria. There is also maintained a cabinet of cultures, both saprophytic and pathogenic.

Instruction is given by means of lectures, and demonstrations of the various methods of isolating and identifying these organisms.

Graduates and those desiring to do special work will be afforded excellent opportunities for study.

MEDICINE—The method so long in vogue in medical schools of teaching this important branch solely by didactic lectures, has for a few years past been superseded by a method combining lectures and recitations in the same exercise. It is the experience of this School that the latter method has been attended with much more satisfactory results. By this mode of instruction the student is not only informed of the special subject of the day, but is required to prepare himself from a text-book. During the recitations questions upon the subject are encouraged, and the Professor has thus the best opportunity to explain such obscure points as he may find are not fully appreciated. The intent and aim of the teaching is to give the instruction a practical direction, the teacher being constantly mindful of the real needs of the student.

Clinical Instruction is carried on at the School, at the New Haven Hospital, and at the New Haven Dispensary.

In the medical clinics at the School, the preliminary examination is made by a student, and this is reviewed and extended as far as necessary by the instructor; the latter explains the relations of the symptoms, makes the diagnosis, and gives the student in charge general directions

for treatment ; the student, subject to correction, gives the precise directions to the patient. All symptoms and physical signs are demonstrated to all the members of the class, and examinations of urine, sputum, gastric contents, and blood are made, when called for, by the student, under the supervision of the instructors.

It is the especial aim in these clinics to familiarize the student with all methods and instruments of diagnostic examination, and the instruction is made as personal as possible. Cases which need to be seen at home are put in charge of the senior students, and obstetrical cases are assigned to them. In such cases the Professor of Clinical Medicine or his assistants give counsel whenever called on.

At the Hospital two medical clinics are held each week during five months of the term, by Professor Thacher and Dr. Fleischner ; these are general medical clinics, but particular attention is given to the demonstration of the various signs of importance in *Physical Diagnosis*. Opportunity is also here provided for the study of those severer cases which the Dispensary service does not furnish, and care is taken that the students see the same patient in various stages of his disease, and, in fatal cases, to demonstrate the lesions.

Mental Diseases receive special consideration in a course of didactic lectures by Dr. H. P. Stearns, and by visits to hospitals for the insane.

Dermatology is taught in a course of clinical lectures by Dr. Fleischner.

Sanitary Science and the Public Health receive attention from Professor Brewer in a course of lectures, which includes the elements of these subjects, with a discussion of methods in practice, and of public sanitary administration.

Toxicology is taught in a course of experimental lectures by Professor Smith, and as treated includes a discussion of the general subject-matter of the science, the statistics of the use of the different poisons, and an exposition of the chemistry and the medico-legal bearings of the ptomaines.

SURGERY—Three didactic lectures to the Senior and Middle classes are given weekly, on the principles and practice of surgery, the course running through two years. Illustrations of minor surgical practice are shown in the service of the New Haven Dispensary, by Professor Carmalt, who has charge of the surgical division. The wards of the New Haven Hospital afford opportunities for the observation and study of the more severe injuries and important surgical diseases. Professors Carmalt and Russell, who are of the visiting staff, hold weekly clinics during their terms of service, in which the advanced students are shown the cases during their whole stay in the Hospital, studying the causes which necessitate operations, where such are necessary, seeing the operations, among which are many of the most important in surgery, and observing the results of treatment.

Ophthalmology is taught in a special course of lectures by Dr. S. B. St. John, of Hartford, and illustrated by a large number of cases in the surgical clinic, particular attention being given to their elucidation.

Otology and Laryngology are taught by Dr. Swain in the School clinics. Each student is required to make examinations with instruments, and becomes familiar with their use and with the normal and principal pathological conditions of the throat and ear.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN—Instruction is given in obstetrics by lectures and recitations, with practical demonstration of the operations of midwifery. Senior students are assigned obstetrical cases from the School clinics, under the direction of the Professor in charge.

Gynaecology is taught by lectures, recitations, and clinics. The Senior class receive instruction from Professor Beckwith at the bed-side in the Hospital, and in the Dispensary from Dr. Wheeler.

Diseases of Children—This important branch of medicine is taught by didactic lectures and recitations, as well as by clinical instruction at the Dispensary and Hospital.

THE NEW HAVEN HOSPITAL is situated but a short distance from the School building, and being the only hospital in a large manufacturing city, which is also a considerable railroad center, its wards constantly afford ample material for the illustration of disease, and furnish frequent occasion for the performance of the various surgical operations.

The new *operating theatre* is now completed and is thoroughly equipped with every requisite and convenience for surgical work. The arrangements are planned with special reference to making the operations available for purposes of instruction to students.

Three Resident Physicians are appointed annually according to the results of an examination before the medical staff. Graduates of this School frequently obtain appointments also in the hospitals of neighboring cities.

THE NEW HAVEN DISPENSARY is located on the School grounds, and is visited by several thousand patients annually. Its service affords a large variety of medical and minor surgical cases.

EXAMINATIONS are held at the close of each year on the studies of the year. The examinations at the end of the first year are upon Chemistry, Histology, Anatomy, and Physiology.

Those at the end of the second year are upon Advanced Physiology, Advanced Anatomy, Materia Medica and Therapeutics.

Those at the end of the third year are upon Pathology, Surgery, Medicine, and Obstetrics.

REQUIREMENTS FOR A DEGREE

Every candidate must be twenty-one years of age, and of good moral character; he must have pursued medical studies for three years, two of which must have been spent in a recognized medical college, and the last at this School; he must have passed the required examination in all the studies of the three years' course, and have presented a satisfactory thesis.

PRIZES

THE KEESE PRIZE—The income of the fund for the Keese Prize, a memorial of Hobart Keese, M.D., of the class of 1855, which amounts to about \$150 annually, is awarded by the Faculty to that member of the graduating class who presents the best thesis. If among the theses offered, none are of sufficient merit, the prize may be withheld. The theses should be presented to the Dean on the third Wednesday before Commencement.

PRIZE FOR BEST EXAMINATIONS—A prize, consisting of a set of obstetrical instruments, will be awarded by Professor Campbell to that member of the graduating class who passes the best examinations in the studies of the Senior year.

LIBRARY

The students of this Department can obtain from the Dean tickets admitting them to the free use of the University Library, which contains over 140,000 volumes and includes the Medical Library.

GYMNASIUM

The privileges of the College Gymnasium can be had on payment of a small fee.

FEES AND EXPENSES

FIRST YEAR:

Matriculation (paid but once),	\$ 5.00
Tuition,	125.00
Practical Anatomy (including instruction and material),	10.00

SECOND YEAR :

Tuition,	125.00
Practical Anatomy (including instruction and material),	5.00

THIRD YEAR :

Tuition,	75.00
Graduation,	30.00

A deposit of \$5 is required in the chemical laboratory, and one of \$1 in the histological laboratory, to cover the cost of apparatus broken by the student ; at the end of the year the excess over the amount of breakage will be returned.

These fees give entrance to all the instruction of the School, including not only the lectures and quizzes, but the practical courses in analytical and physiological chemistry, urinary analysis, histology, pathology, osteology, syndesmology, and in clinical medicine and surgery.

The tuition fee for the first and second years is due at the beginning of each of the three terms, in installments of \$45, \$45, and \$35, respectively ; the third year the installments are \$27, \$27, and \$21.

Fees are paid to the Treasurer of the University, except the graduation fee which is paid to the Dean.

BOND—Students who do not pay in advance are required to give a bond to the Treasurer for three hundred dollars, executed by a satisfactory bondsman ; a blank for this bond will be furnished on application to the Treasurer. Those who deposit such bonds will receive term bills, with interest added, shortly before the end of each term, to be paid on or before the commencement of the next succeeding term, and students who deposit bonds must pay all arrearages before they can receive back their bonds from the Treasurer. No degree can be conferred until all term bills are discharged.

Students will be assisted in finding board and lodging by the Janitor.* Prices range from four and a half dollars a week upwards.

* Mr. William Blackwood, 148 York St.

INSTRUCTION TO GRADUATE AND SPECIAL STUDENTS
NOT CANDIDATES FOR A DEGREE IN MEDICINE

The instruction here offered to graduates in medicine is intended to meet the requirements of two classes of students: first, those who wish to review or supplement their knowledge of the regular studies of the medical curriculum, as taught in this School; and second, those who wish to fit themselves in special lines of medical work, or for the duties of a medical examiner, or for medico-legal and sanitary examinations.

Courses in the following subjects are specially mentioned: Experimental Physiology; Physiological Chemistry; Chemical Analysis, including General Qualitative Analysis and the Quantitative Methods as applied in medicine; Experimental Toxicology and Medico Legal Examinations; Sanitary Analysis, including the Chemical and Bacteriological Examinations of Food, Air, Water, etc.; Practical Anatomy; Normal and Pathological Histology; General Bacteriology.

But any of the regular studies may be taken, and special courses to meet the requirements of the student may be arranged at hours convenient to the instructors.

Special Students are not taken in the practical branches of medicine, but the studies mentioned above and the general studies of the course are open to such persons as may desire to pursue them, if by their previous studies they are prepared to profit by the opportunity.

The charges for instruction will depend on the courses taken, and can be ascertained for any particular line of study by applying to the Dean.

For further information, address Professor HERBERT E. SMITH, Dean. Office hours, from 11:30 A. M. to 12:30 P. M. on Wednesdays, at the School, 150 York st.

DEPARTMENT OF LAW

(YALE LAW SCHOOL)

FACULTY

- REV. TIMOTHY DWIGHT, D.D., LL.D., *PRESIDENT*
HON. FRANCIS WAYLAND, LL.D., *Dean of the Law Faculty*
HON. WILLIAM C. ROBINSON, LL.D., *Professor of Elementary and Criminal Law and the Law of Real Property*
SIMEON E. BALDWIN, M.A., *Professor of Constitutional and Mercantile Law, Corporations, and Wills*
JOHNSON T. PLATT, M.A., *Professor of General Jurisprudence, Torts, and Equity*
WILLIAM K. TOWNSEND, D.C.L., *Edward J. Phelps Professor of Contracts and Admiralty Jurisprudence*
THEODORE S. WOOLSEY, LL.B., M.A., *Professor of International Law*

SPECIAL LECTURERS AND INSTRUCTORS

IN THE UNDERGRADUATE COURSE

- HON. EDWARD J. PHELPS, LL.D., *Lecturer on Evidence*
MARK BAILEY, M.A., *Instructor in Forensic Elocution*
HON. HENRY STODDARD, LL.B., M.A., *Instructor in Evidence*
HON. WILLIAM E. SIMONDS, LL.B., *Lecturer on Patent Law*
HON. MORRIS W. SEYMOUR, M.A., *Lecturer on Corporations*
M. DWIGHT COLLIER, M.A., *Lecturer on Attachments, Judgments, and Executions*
THOMAS THACHER, LL.B., M.A., *Lecturer on Corporate Trusts*
JAMES M. TOWNSEND, JR., LL.B., *Lecturer on Transfer of Monetary Securities*
GEORGE M. SHARP, LL.B., *Lecturer on Insurance*
ROGER FOSTER, LL.B., M.A., *Lecturer on Federal Jurisprudence*

IN THE GRADUATE COURSE

- ALBERT S. WHEELER, M.A., *Instructor in Roman Law*
ARTHUR M. WHEELER, M.A., *Instructor in English Constitutional History*
WILLIAM G. SUMNER, LL.D., *Instructor in Political and Social Science*
ARTHUR T. HADLEY, M.A., *Instructor in Railway Management, and Economics of Transportation*
EDWARD V. RAYNOLDS, D.C.L., *Instructor in Comparative Jurisprudence*
JOHN A. ROBINSON, LL.B., M.D., *Librarian*
CLEMENT D. RINEHART, LL.B., *Assistant Librarian*

It is the aim of the Law School to give to all students in its regular undergraduate course a thorough acquaintance with the general principles and rules of American law, so as to fit them for the Bar of any State; to extend to those who do not propose to become practicing lawyers, but wish to pursue some particular branches of legal or political knowledge, such assistance as they may desire; and to offer to advanced students, who are able to devote to it the necessary time, instruction in all that belongs to law as a science in its widest sense. Such instruction is now given in an undergraduate course, a graduate course, and two special courses.

The undergraduate course is mainly devoted to the practical side of legal education, but also gives some introduction to the general ideas and sources of jurisprudence. In the graduate course, the studies are so arranged that those of the first year have no necessary connection with those of the next, and can therefore be profitably pursued by themselves when the student has no time to devote to a more extended education. The first year is mainly occupied with further instruction in practical topics begun in the undergraduate course, such as Corporations, Railroad Law, Patents, Code Pleading, and Practice in the United States Courts. The second year is mainly devoted to studies of a more scientific and philosophical character, such as General and Comparative Jurisprudence, Legislation and Government, Roman Law, the French Codes, and Private International Law. It is believed that the studies of the undergraduate course, and those of the first year of the graduate course, cover all the topics which it is desirable for the ordinary law student to examine before admission to the Bar; and the fourth year (in which the degree of Doctor of Civil Law is awarded) is recommended only to those who desire to fit themselves to be something more than practicing lawyers. For the special courses see page 153.

The Law School occupies an entire story of the Court House of New Haven County, facing the Green, on the

opposite side from the College buildings. It has, upon the same floor, two lecture-rooms, a large library hall, the office of the Dean of the Faculty, and other apartments furnishing every needed convenience for quiz-clubs and debating societies. A special feature of the School is the peculiar facility which it affords its students for observing actual practice in court. This is due to the fact that in the Court House two terms of the Supreme Court of Errors of Connecticut are held annually; and the Superior Court and Court of Common Pleas (the principal Civil and Criminal Courts of the State) are also in session almost daily, during each of the School terms.

The students are allowed the freest access to the large library of the School, examining the books on the shelves for themselves, without the intervention of the librarian. The familiarity with the reports and authorities that is thus gained, the Faculty deem of great importance in accustoming the student to prepare his cases intelligently and thoroughly in his future practice. A debating society—the Kent Club—gives a good opportunity for practice in public speaking, and the formation of class quiz-clubs, to meet in the Law School apartments, is also encouraged. Those formed in the Junior year are under the special direction of the assistant librarian. The discussion of legal topics, unreservedly and familiarly by the students among themselves, is promoted, and the fact that they generally come from a wide range of States renders such comparisons of ideas of special interest and value to all. The share of the School in the general advantages of the University gives the students many opportunities of broadening their views and acquiring knowledge in regard to matters outside of their strictly professional work. They can, on application to the Dean, obtain permission to be present at one or more of the special courses of graduate instruction in the Department of Philosophy and the Arts, or the lectures on Medical Jurisprudence, Anatomy, Insanity, etc., in the Medical School, on payment of a moderate fee.

The College Gymnasium is open to members of the Law School on payment of moderate fees.

COURSES OF INSTRUCTION

The regular courses of instruction, including both required and elective studies, are as follows :

UNDERGRADUATE COURSE

JUNIOR YEAR :

- Judge STODDARD : Recitations—Evidence. Professor WAYLAND : Lectures—English Constitutional Law, International Law.
- Professor ROBINSON : Recitations—Elementary Law, Pleading.
- Professor BALDWIN : Recitations—Mercantile Law. Lectures—Nature and History of American Law, Wills.
- Professor PLATT : Recitations—General Jurisprudence, Torts. Lectures—Jurisprudence.
- Professor TOWNSEND : Recitations—Contracts.
- Professor WOOLSEY : Recitations—International Law.
- Mr. BAILEY : Lectures—Forensic Elocution.

SENIOR YEAR :

- Professor ROBINSON : Recitations—Real Property, Criminal Law. Lectures—Estates, Conveyancing, Forensic Oratory.
- Professor BALDWIN : Recitations—Mercantile Law, Corporations. Lectures—American Constitutional Law, Public Corporations, Wills or Roman Law, Practice.
- Professor PLATT : Recitations—Equity.
- Professor TOWNSEND : Recitations—Contracts.
- Professor WOOLSEY : Lectures—International Law.
- Mr. SEYMOUR : Lectures—Private Corporations.
- Mr. SIMONDS : Lectures—Patents.
- Mr. COLLIER : Lectures—Attachments, Judgments, and Executions.
- Mr. THACHER : Lectures—Corporate Trusts.
- Mr. J. M. TOWNSEND : Lectures—Transfer of Monetary Securities.
- Mr. FOSTER : Lectures—Federal Jurisprudence.
- Mr. SHARP : Lectures—Insurance.

GRADUATE COURSE

FIRST YEAR :

- Professor ROBINSON : Recitations—Patents.
- Professor BALDWIN : Recitations—Railroad Law, Practice in U. S. Courts. Lectures—American Constitutional Law.
- Professor PLATT : Recitations—Municipal Corporations, Statute Law.
- Professor TOWNSEND : Recitations—Admiralty Law, Sales.
- Professor WOOLSEY : Lectures—International Law.

Professor SUMNER : Lectures—Political History and Science.
Professor A. M. WHEELER : Lectures—English Constitutional History.
Professor HADLEY : Lectures—Railway management.
Dr. RAYNOLDS : Lectures—Roman Law.

SECOND YEAR :

Professor ROBINSON : Lectures—Canon Law.
Professor BALDWIN : Recitations—Comparative Jurisprudence, Code Napoléon, Conflict of Laws.
Professor PLATT : Recitations—General Jurisprudence.
Professor WHEELER : Lectures—English Constitutional Law.
Professor SUMNER : Lectures—Political and Social Science.
Mr. A. S. WHEELER : Recitations—Roman Law.
Professor HADLEY : Lectures—Economics of Transportation.

The method of instruction, as will be seen by the foregoing schedule, is mainly that of recitations. It is the conviction of the Faculty of this Department, as well as the tradition of the University, that definite and permanent impressions concerning the principles and rules of any abstract science are best acquired by the study of standard text-books in private, followed by the examinations and explanations of the recitation room. Hence, although certain subjects are separately taught by lectures, either because the want of proper manuals, or the constant and rapid advance of learning, or economy of time, requires the adoption of that method, care is taken that the same topics shall be covered by recitation work in connection with the wider branches of the law to which they belong. The recitation hours, however, are not devoted entirely to the questioning of the student. While this is done with sufficient thoroughness to hold him up to his work of preparation, ample opportunity is afforded for a free colloquial discussion of the subject of the lesson and for the presentation and solution of the difficulties which he may have encountered in his private study. In this manner each student is brought into personal communication with the instructor in reference to his daily work, and, as far as practicable, receives the benefits which would be obtained if he were placed under the individual tutorship of his professor.

The several courses of study to which the attention of the student is directed in his undergraduate career are intended to familiarize him with all the branches of the law, which ordinarily become useful to the practitioner in the earlier years of his professional life. The course, embracing Jurisprudence, American Law, English and American Constitutional Law, and Elementary Law, is pursued under the guidance of four different professors. In this course, the fundamental conceptions which underlie all systems of jurisprudence are brought to the

notice of the student and fully defined and explained ; the peculiar doctrines which characterize our American Law are pointed out ; the principles of constitutional government, and the special features it exhibits both in this country and in England, are discussed ; and the entire body of the common law in its four great divisions, is reduced to distinct propositions and illustrated by numerous collateral readings. This course alone covers the ground usually traversed by the student in an office prior to his admission to the bar.

The course in Real Property includes recitations in a standard work of a general character, and, subsequently, in text-books upon special subjects, such as the law of Mortgages, the law of Landlord and Tenant, etc. Collateral to this course are two others : one, a series of lectures on Estates, in which the law and practice in Guardianships of Infants and Incapables, and in the Administration of Decedents' Estates, are considered ; the other, a course of practical instruction in Conveyancing, in which the students are exercised in drawing all the instruments commonly employed in the transaction of business concerning real property.

The course on Contracts is the most extended, as it is the most important, in the School. It occupies a greater part of the time of two of the professors. It continues during both the Junior and Senior years, and embraces, among other important topics, those of Agency, Bailments, Bankruptcy and Insolvency, Bills and Notes, Consideration and Assent, Contract Liabilities of Infants and Married Women, Liens, Marine, Fire, and Life Insurance, Partnership, Sales, Shipping Sureties, Trademarks, and Telegraphs. In addition to the text-books used in this course, the leading cases, decided since the text-book was written, are referred to, thus bringing the law on each point down to the date of instruction. Collateral to this course are five others : one on Wills, in which the law of testamentary dispositions and executorship is examined ; another on Patents, in which the nature of patentable inventions, the mode of issuing letters patent, and the remedies for infringement are considered ; a third on Corporations in general, treating the law governing the organization, privileges, duties, and liabilities of all incorporated bodies ; the fourth and fifth on Private and Public Corporations respectively, in which the practical arrangement of bodies politic of both classes is illustrated and explained.

The course on Torts consists of recitations on that subject, from recent and approved text-books, with a running commentary by the instructor, explaining and applying the principles contained in the lesson.

The course on Equity embraces the whole body of Equity Jurisprudence, and is taught by recitations from the text-book, with occasional lectures on the obscurer topics. Collateral to this course is a series of lectures on Equity Pleading, discussing the principles and practice by which equitable remedies are governed and applied.

The course on Criminal Law extends throughout the Senior year,

covering the entire matter contained in the exhaustive treatises now accessible, and embracing the topics of Procedure and Evidence as well as the substantive law of Crimes. Current cases of note, arising in any part of the country, are made subjects of discussion in connection with the rules of law by which they are to be decided.

The course on Pleading embraces the subjects of Common Law Pleading and Code Pleading, both taught by recitations and examples; while the details of the latter are enforced by requiring the students to draw complaints, answers, etc., in cases of their own selection, and to submit them to the instructors for criticism and correction.

The course on Evidence covers the matter contained in the first and second volumes of Greenleaf on Evidence: the subjects in the first volume being taught by recitation from the text-book; those in the second, by lectures amplifying and explaining, in the light of modern cases, the principles involved in the various topics. Collateral to this and the foregoing course are four others: one on Forensic Oratory, consisting of a series of lectures, in which the preparation and conduct of a suit, in all its different stages, are explained; the second, on Forensic Elocution, in which practical instruction is given in the art of public and forensic speaking; the third on Process, including the subjects of Attachments, Garnishment, and Execution; and the fourth on Practice, a series of familiar lectures on the methods of transacting general legal business.

The course on International Law occupies portions of both undergraduate years. In the Junior year, the work consists of recitations covering the field occupied by Woolsey and Pomeroy on International Law. In the Senior year, instruction is given by lectures on particular topics, especially on questions which are, for the time being, exciting public attention, and which demand the application of the principles examined in the previous year.

The course on Roman Law is intended as an introduction to the more advanced studies of the Graduate years, and, though necessarily brief, is sufficient to communicate to the student an accurate knowledge of the distinguishing features and doctrines of the civil law, and to refer him to the original sources for more detailed information.

The studies of the first Graduate year have been selected with a view of preparing the intended practitioner for the higher walks of professional life. The subjects are of universal interest, the law which governs them is substantially the same in all parts of the country, they involve the most extensive financial enterprises of the age, and on these accounts form the most important practical topics at present embraced within our law. Particular attention to them has, therefore, been deemed an essential requisite to a finished legal education, and the devotion to them of an additional year, on the part of students and instructors, has been thought a wise, if not a necessary measure. The various courses

are critically taught both by text-book and by lecture, and each student receives all the assistance he may desire in his personal examination of cases and authorities. Special attention is paid to the methods of practice and pleading in the United States Courts, both in common law, equity, and admiralty cases, and instruction is therefore given on these subjects by three of the Faculty. The students are required to draft pleadings, and in matters of special difficulty, such as the conduct of proceedings *in rem* in admiralty, these pleadings are carried on through all the usual steps, and the issues made up are argued before the Professor. They are also made familiar with the leading cases on these points in the United States Supreme, Circuit, and District Courts. The value of this year of special work to the earnest and intelligent graduate cannot be overestimated.

The courses of instruction in the second Graduate year are designed to afford to the advanced student an opportunity to round out his legal acquirements with a knowledge of the more profound and philosophical principles of human law. The primary conceptions to which he was introduced at the commencement of his studies are again taken up and developed in a scientific method, and examined in the light of various systems of practical jurisprudence now or heretofore prevailing. In view of the limited time which can ordinarily be devoted by young men to these pursuits, the courses have been so arranged as to present these fundamental ideas as clearly and in as many applications as is possible, leaving it to future private study to enlarge the outline and complete the details of the work.

The course on General Jurisprudence consists of lectures and recitations from such works as Austin on Jurisprudence, Holmes on the Common Law, etc., and the students are required to write theses on the various topics. The course on Roman Law comprises the careful study of the Institutes of Justinian, in connection with institutional works of modern authors, and the perusal of selected titles from the Digest, accompanied by oral explanation. Particular attention is devoted to this course of study, and every effort is put forth to make the students familiar with the doctrines of the civil law, as well as with the technical language in which these have been expressed. The course on Comparative Jurisprudence includes among its chief branches a careful study of the French Codes, compared with other systems of jurisprudence, particularly the Roman, English, and American, and recitations upon private international and inter-state law, with the investigation of leading cases on these subjects, decided in the French and American courts. The course on Canon Law consists of a series of lectures on the history, development, and fundamental theories of the Canon law, with select readings from the *Corpus Juris Canonici*, and from French and English treatises upon the subject. The course on Political and Social Science is one of the principal courses in the Philosophical Department

of the University (see page 103), and is attended by the Graduate students of the Law School in common with the members of that Department. The course on the Economics of Transportation is a continuation of the series of Lectures on Railway Management given in the first graduate year, extending the view of the student from the single subject of railways to all the instrumentalities of commerce.

In addition to the regular course of instruction, two Special Courses are provided: one for those who desire some acquaintance with law as a preparation for business life; the other for persons not intending any active business or professional career, but desiring to acquire an enlarged acquaintance with our political and legal systems and the rules by which they are governed. The first of these special courses covers a single year; the second comprises two years. The studies of the first course may be arranged as follows, but this selection can be varied (if desired) on consultation with the Dean of the Faculty:

FIRST SPECIAL COURSE—ONE YEAR

Professor ROBINSON: Recitations—Elementary Law. Lectures—Estates.

Professor BALDWIN: Recitations—Agency, Partnership, Corporations, Bills and Notes, Bankruptcy and Insolvency. Lectures—American Law, American Constitutional Law.

Professor PLATT: Recitations—General Jurisprudence, Torts.

Professor TOWNSEND: Recitations—Marriage, and Husband and Wife, Sales, Shipping, Insurance, Sureties, Bailments, Telegraphs, Trademarks, Liens.

Professor WAYLAND: Lectures—International Law.

Professor HADLEY: Lectures—Industrial Legislation.

Mr. BAILEY: Lectures—Elocution.

Mr. COLLIER: Lectures—Attachments, Judgments, and Executions.

Mr. THACHER: Lectures—Corporate Trusts.

Mr. J. M. TOWNSEND: Lectures—Transfer of Monetary Securities.

SECOND SPECIAL COURSE—TWO YEARS

FIRST YEAR

Professor ROBINSON: Recitations—Elementary Law. Lectures—Estates.

Professor BALDWIN: Recitations—Bankruptcy and Insolvency. Lectures—American Law, American Constitutional Law, Roman Law.

Professor PLATT : Recitations—General Jurisprudence.
Professor TOWNSEND : Recitations—Sales, Insurance.
Professor WAYLAND : Lectures—International Law.
Professor SUMNER : Lectures—Political and Social Science.
Professor FARNAM : Lectures—Public Finance.
Professor HADLEY : Lectures—Industrial Legislation.
Mr. BAILEY : Elocution.
Mr. SEYMOUR : Lectures—Private Corporations.
Mr. WHITE : Lectures—Local Government in the United States.
Mr. SHARP : Lectures—Insurance.

SECOND YEAR

Professor BALDWIN : Recitations—Private International Law.
Professor PLATT : Recitations—Municipal Corporations, General Jurisprudence.
Professor WOOLSEY : Lectures—International Law.
Professor SUMNER : Lectures—Political and Social Science.
Mr. WHEELER : Recitations—Roman Law.
Mr. THACHER : Lectures—Corporate Trusts.
Mr. J. M. TOWNSEND : Lectures—Transfer of Monetary Securities.
Mr. FOSTER : Lectures—Federal Jurisprudence.

In the latter course the students may, at their option, defer some of the studies of the first year until the second, and when desired, other branches taught in the Law School may be pursued, instead of certain of those here mentioned, at the discretion of the Faculty. Some or all of the studies of this course may be taken by those who, having received a bachelor's degree implying a course of undergraduate study equivalent to that pursued in the Academical Department, are completing their education with a view of applying for the degree of Doctor of Philosophy (see page 101). Those who take the full course may apply for the degree of Bachelor of Civil Law (B.C.L.).

Besides these various exercises, the undergraduate students are required, from time to time, to draft contracts, wills, and other similar instruments ; the work of each being reviewed and commented upon, either in public or in private, by the instructor. Public Moot Courts, besides those of the class quiz-clubs, are regularly held, at which one of the professors presides as judge ; and the students acting as counsel, in the argument of cases, are required to draw the necessary pleadings, according to the common law or equity forms, as the case may be. Occasionally,

also, cases are tried by the students before a jury of their own number, in a court regularly organized, with a full complement of judicial, clerical, and executive officers, where the proceedings are conducted in the same manner as in ordinary courts of law.

TERMS AND VACATIONS

There are three terms in each year : the Fall Term, beginning thirteen weeks from the day after Commencement, and continuing to the Thursday before Christmas ; the Winter Term, beginning in January, after a vacation of three weeks, and lasting eleven weeks ; and the Spring Term, beginning after a vacation of two weeks, and continuing until Commencement.

REQUIREMENTS FOR ADMISSION

UNDERGRADUATE COURSE

Applicants for admission to the Junior Class must be at least eighteen years of age, and must produce certificates of good moral character. Students who have not taken a degree from some collegiate institution will not be admitted as candidates for the degree of LL.B., until they have passed satisfactory examinations on the outlines of the History of England (Green's History of the English People is recommended) and of the United States, and on the text of the Constitution of the United States. Those, however, will be excused from this examination who present a certificate that they have passed a "Regents' Examination for Law Students," conducted under the authority of the Board of Regents of the University of the State of New York.

To entitle a person to admission to advanced standing as a member of the Senior class, he must be at least nineteen years of age ; must, if a College graduate, have studied law under a competent instructor, or at the Law School of some College or University, for at least one year ; must, if not a College graduate, have studied law under a com-

petent instructor for at least two years, or at a Law School for at least one year; and must pass such examinations as are required for those entering the Senior Class in the regular course, at which it will be sufficient if he is prepared to be questioned on Parsons on Contracts (excepting only from vol. ii, pages 257 to 488, and from vol. iii, pages 350 to 423 and 525 to 557); Blackstone's Commentaries (except Book 4), Robinson's Elementary Law, Gould on Pleading, Townsend's Notes on Code Pleading, Greenleaf on Evidence, vol. i, Cooley on Torts, and the elementary principles of testamentary law, as given in such works as Hawkins on the Construction of Wills. Those not College graduates must also pass the preliminary English entrance examination, or produce a "Law Student's Certificate," from the Regents of the University of the State of New York. Attorneys at Law, however, of any State are entitled to admission to the Senior Class, without examination, on the exhibition of their certificates of admission to the bar; and special students, not candidates for a degree, will be admitted to any of the exercises of the School without examination.

GRADUATE COURSE

The first year of the graduate course is open, without examination, to graduates from any Law School, having the degree of LL.B.

The last year is open only to those who have successfully completed the studies of the preceding year, and received the degree of Master of Law (M.L.). A preliminary examination upon the outlines of Roman Law and Roman History must also be passed, by all who have not taken their Bachelor's degree at some Law School where Roman Law is a prescribed study. The degree of Doctor of Civil Law (D.C.L.) may be applied for at the end of this year, by those who have been graduated at some collegiate institution as Bachelor of Arts or Philosophy; or who are graduates of this Law School, and have attained a prescribed standard of scholarship on their examinations for the de-

degrees of LL.B. and of M.L. A good knowledge of either the French or German language, as well as of Latin, is also required. The Faculty will present no one for the degree of D.C.L., who has not attained a high standard of proficiency in the studies pursued.

EXAMINATIONS

There will be an examination of candidates for admission to the Junior Class immediately after the opening of the Fall Term. Candidates for admission to the Senior Class are examined at the end of the Spring Term, or beginning of the Fall Term. Seniors are examined for a degree, only at the close of the Spring Term. In the undergraduate course there are certain studies upon which all students are examined at the close of the year, and others upon which only those who desire, are examined. The award of "honors" is confined to those who pass both examinations. The Junior "pass" examination includes the studies of the year in Elementary Law, Contracts, Pleading, Evidence, Torts, and Wills. The Junior "honor" examination includes the studies of the year in Jurisprudence and International Law, and such other branches as the Faculty may from time to time prescribe. The Senior "pass" examination includes the studies of the year in Contracts, Real Property, Criminal Law, Equity, American Constitutional Law, Patents, Public and Private Corporations, and Estates. The Senior "honor" examination includes the studies of the year in International Law, Roman Law, and such other branches as the Faculty may from time to time prescribe. Examinations for degrees in the graduate course are held at the close of the Spring Term. Every candidate for a degree, both in the undergraduate and graduate courses, must also submit a written thesis on a given legal topic, which must be approved by the Faculty.

LIBRARY, PRIZES, ETC.

The special Library of the Department, which has a permanent endowment for its support (the English Fund,

established by the Hon. James E. English, M.A., in 1873), contains about nine thousand volumes, and is open daily during term time. It embraces all the reports of Great Britain and America, with an extensive collection of text-books and the leading legal periodicals. The students can also draw books from the general University libraries, containing over 170,000 volumes.

The following prizes are open to competition :

The **TOWNSEND PRIZE** (established by the Hon. James M. Townsend, in 1874), of \$100, to that member of the Senior Class who shall write and pronounce the best oration or thesis at the public anniversary exercises on graduation.

The **JEWELL PRIZE** (established by the Hon. Marshall Jewell, M.A., in 1871), of \$50, to that member of the Senior Class who receives the highest marks at the final examination of his class, at their graduation.

The **BETTS PRIZE** (established by Frederic H. Betts, M.A., in 1875), of \$50, to that member of the Junior Class who receives the highest marks at his annual examination.

The **O. S. SEYMOUR PRIZE** (established by the family of the late Hon. Origen S. Seymour, LL.D., in 1885), of \$60, to that member of the graduating class who, in the opinion of the Faculty, has made the greatest improvement in scholarship during both years of his course.

DEGREES

In the undergraduate course the degree of Bachelor of Laws is conferred by the Corporation upon the recommendation of the Faculty of the Department, based on a satisfactory "pass" examination and the submission of a satisfactory thesis, on the following persons :

1st. Attorneys at Law, who have been members of the Department for one year after their admission to the Bar.

2d. Any students who have been members of the Department for not less than two years, and who passed satisfac-

torily the Junior "pass" examination at the end of their first year.

3d. Students who have been admitted to advanced standing as members of the Senior Class, and have remained in that Class for not less than one year.

The examination for the degree is mainly in writing, and is conducted under the supervision of an examining committee, appointed by the Superior Court, and the successful candidates, if twenty-one years of age, may be thereupon admitted to the Connecticut Bar. An oral examination is also had, upon one or two studies, before members of the Bar from different States, appointed for the purpose.

The degree of Bachelor of Civil Law (B.C.L.) will be conferred, after a satisfactory examination and submission of a satisfactory thesis, on those who complete the second special course of two years. In the graduate course the degrees of Master of Laws (M.L.) and Doctor of Civil Law (D.C.L.) are conferred under the conditions before specified.

Degrees are awarded, in cases of students of unusual merit, *cum laude*, *magna cum laude*, or *summa cum laude*.

EXPENSES

The fees for tuition and use of the library in the undergraduate and first special courses are \$45 for the Fall Term, \$35 for the Winter Term, and \$35 for the Spring Term, or \$100 for the entire year; and in the graduate and second special courses, for the first year, \$50 for the Fall Term, \$40 for the Winter Term, and \$40 for the Spring Term, or \$125 for the whole year; and for the second year, \$80 for the Fall Term, \$70 for the Winter Term, and \$70 for the Spring Term, or \$200 for the whole year; to be paid to the Treasurer of the University in advance, or secured by a bond with surety to his satisfaction. Where payment is not made in advance, interest will be added. The diploma fee is \$5, and the Court fees for admission to the Bar are

\$8. A further fee of \$5 is chargeable for admission to practice in the United States Courts for the District of Connecticut, if this is also desired. The tuition charges for other special students vary in proportion to the amount of instruction and supervision required. Board and lodgings can be obtained at prices ranging from \$5 a week upwards.

For further particulars, inquiries may be addressed to Professor Francis Wayland, Dean of the Faculty.

LIBRARIES

ADDISON VANNAME, M.A., *Librarian*

FRANKLIN B. DEXTER, M.A., *Assistant Librarian*

J. SUMNER SMITH, B.A., *Librarian of the Linonian and Brothers
Library*

HORACE S. KEPHART, M.A., *Assistant*

The Standing Committee in charge of the Library, appointed by the Corporation, consists of the following :— President DWIGHT, Ex-President PORTER, Professors SALISBURY, DAY, FISHER, NEWTON, and LOUNSBURY, and the Librarian.

The whole number of volumes in the several libraries of the University is nearly 200,000.

The UNIVERSITY LIBRARY contains about 140,000 volumes and at least half as many unbound pamphlets. For some years past the average annual increase has been 5,000 volumes. Of current periodical publications, including publications of learned societies, the Library receives an unusually large number, the foreign serials alone being not less than five hundred. While designed especially for the use of the officers, resident graduates, and students of the several Departments of the University, other persons may have the privilege of consulting and, by permission of the Library Committee, of drawing books. The Library is open daily, except Sundays, in term-time from 9:30 A. M. to 5 P. M. (in Winter to 4:30 P. M.). In the Winter vacation it is open during the morning hours, and in the Summer vacation on Monday, Wednesday, and Saturday mornings.

The LINONIAN AND BROTHERS LIBRARY, occupying the north wing of the Library building, contains 30,000 volumes, to which additions of not far from one thousand volumes, chiefly of the best current literature, are annually made. It is designed primarily for the use of the students, and is open in term-time on Monday, Tuesday, Thursday, and Friday, from 1:30 to 3 P. M., and on Wednesday and

Saturday from 10 A. M. to 12 M., and from 1:30 to 4 P. M. In vacation it is open on Wednesdays and Saturdays from 10 A. M. to 12 M.

In addition to the periodicals received at the University Library there will be found in the Reading Room (in the Cabinet building) forty-two daily newspapers, American and foreign, fifty weeklies, and over fifty periodicals. This is open daily in term-time from 9:30 A. M. to 8 P. M. (on Sunday from 1 to 8 P. M.).

In Dwight Hall, which is open daily from 10 A. M. to 10 P. M., will also be found forty-five newspapers and periodicals, mostly religious, and a library of nearly 1,000 volumes selected mainly with reference to the study of the Bible.

The LAW LIBRARY, containing about 9,000 volumes, among which are included complete sets of the English, American, Irish, and Canadian Reports, occupies rooms adjoining those of the Law School in the County Court House. It is open daily in term-time from 8:30 A. M. to 12:45 P. M., and from 2 to 5:30 P. M. (except Saturday afternoon); in vacation from 9 A. M.

The SHEFFIELD SCIENTIFIC SCHOOL LIBRARY, in Sheffield Hall, is a valuable collection of 6,000 volumes, chiefly mathematical.

The TROWBRIDGE REFERENCE LIBRARY of the Divinity School, in Bacon Memorial Hall, contains about 3,000 volumes of standard and recent theological literature. It is open in term-time throughout the afternoon.

The LOWELL MASON LIBRARY OF CHURCH MUSIC, in West Divinity Hall, is accessible to those interested in the study of this subject. It embraces about 8,000 titles in 4,000 volumes.

The Art School has a Library of about 500 volumes.

The Library of the Medical School is incorporated in the University Library.

The Library of the American Oriental Society, consisting of about four thousand books and manuscripts, is deposited in the University Library building.

PEABODY MUSEUM OF NATURAL HISTORY

TRUSTEES

PROFESSOR JAMES D. DANA, PH.D., LL.D., *Chairman*
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HON. ROBERT C. WINTHROP, LL.D.
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PROFESSOR OTHNIEL C. MARSH, PH.D., LL.D.
HON. GEORGE PEABODY WETMORE, M.A.
PROFESSOR EDWARD S. DANA, PH.D.

CURATORS

OTHNIEL C. MARSH, PH.D., LL.D., *Curator of the Geological Collection*
ADDISON E. VERRILL, M.A., *Curator of the Zoological Collection*
EDWARD S. DANA, PH.D., *Curator of the Mineralogical Collection*

In 1866, George Peabody, of London, but of Massachusetts birth, entrusted to a board of Trustees, selected by him, the sum of \$150,000, "to found and maintain a Museum of Natural History, especially in the departments of Zoology, Geology, and Mineralogy, in connection with Yale College." Of this sum \$100,000 was devoted by Mr. Peabody to the erection, "on land to be given for that purpose by the President and Fellows of Yale College, of a fire-proof building," "planned with special reference to its subsequent enlargement," to be, "when completed, the property of Yale College." Of the remainder of the gift, \$20,000 was set apart to "accumulate as a building fund," and \$30,000 to meet by its income from investment the expenses attending "the care of the museum, the increase of its collections, and the general interests of the departments of science before named."

Ten years later, in 1876, the first wing of the Museum—the part now standing—was completed and furnished with cases at a cost of \$175,000, the whole outlay being met by the accumulated building fund. The central part of the projected structure and the South wing—which will extend it to Library street—remain to be built whenever the means available for the purpose shall be adequate.

The first floor of the building is devoted to the department of Mineralogy and to the purposes of a large lecture room. The minerals occupy cases in the west room, the door of which fronts the entrance to the Museum. The minerals of the Gibbs collection, deposited by Col. George Gibbs with the College in 1809-10, and purchased in 1825 at a cost of \$20,000, and the extensive accumulations since made, are here preserved and for the most part on exhibition, making it one of the largest public collections in the country. The private cabinet of Professor Brush, arranged in drawers in his private room on the same story, although not open to general exhibition, adds greatly to the means of study and investigation in this department. Besides minerals, the exhibition room contains one of the largest collections of meteorites in the country; among the specimens, there are the famous mass of meteoric iron from Texas, weighing 1635 pounds; some hundreds of meteorites, large and small, all of which came from a single fall in Iowa, in May, 1879; the interesting Weston meteorite, which fell at Weston, Connecticut, in 1807, and was soon after described at length by Professors Silliman and Kingsley; besides many others of special interest. A case in the center of the room contains the large and beautiful collection of Chinese artistic work in stone, chiefly in jade and agate, with other like objects, bequeathed by Dr. S. Wells Williams, who was for forty-three years in China as Christian philanthropist, editor, author, and attaché to the American legation, and for some years before his decease occupied the chair of Professor of Chinese in the University. The large room on the same story adjoining the Mineral room, on the north side of the hall, is arranged for miner-

alogical and blowpipe instruction, with desks and a students' cabinet of minerals, and is under the charge of Professor Penfield.

The second floor is given up to Geology and Palaeontology. The western exhibition room is occupied by a general collection of fossils, arranged for the most part in the order of the geological formations, and the southern by vertebrate fossils. The latter are mostly collections made by Professor Marsh, the larger part from regions west of the Mississippi, in Kansas, the states and territories of the Rocky mountain region, Oregon, etc. In the vertebrate room, the horizontal case to the left of the entrance contains a large suite of specimens of remains of the *toothed* birds—the *Hesperornis* and *Ichthyornis*—discovered by Professor Marsh in the Cretaceous rocks of Kansas; and near by in the first vertical case against the wall are the bones of a large *Mastodon* from Southern New York. In the center of the room there are a part of the bones of a gigantic *Dinosaur* from Wyoming, and, standing vertically, a large slab with the skeleton of a *Mosasauro* from Kansas. The horizontal case to the right of the entrance and the vertical case adjoining it against the west wall contain the remains of another *Dinosaur* about 30 feet long, which, as the specimens show, had ranges of very broad and thick plates, and one or two rows of immense spines, along the back. In the lower part of the next vertical case, lies a thigh-bone of an *Atlantosaurus* (the largest of *Dinosaurs*, and of land animals yet known), this bone having a length (when entire) of about seven feet. In a horizontal case on the south side of the same room there are, among the feet of various animals, the bones of the feet of three-toed and four-toed horses from the lower Tertiary of Wyoming. In two wall cases at the southeastern corner are the remains of the *Dinocerata*, huge mammals from the Eocene of Wyoming. In the second wall case on the east are the bones of the Miocene *Brontotheridae* from Dakota and Nebraska. Of the large collection of foot-prints belonging to the University, only

a few fine slabs are on exhibition, part of them in each of the two exhibition rooms of the second story. One of the most interesting is a slab about twelve feet long covered throughout with raindrop impressions, and, besides these, two lines of foot-prints of biped reptiles, one line of them extending the whole length of the slab.

The third story is occupied with the zoological collections so far as there is room for their exhibition. The general zoological collection occupies the western room ; and nearly the whole has been accumulated since Professor Verrill took charge of the department. The specimens are well arranged for exhibition and all labeled. Facing the south door stands a vertical case devoted to the Sponges, among which are many species of the siliceous or glass sponges (*Euplectella*, etc.). Beyond the sponges, twelve cases are filled with the collection of corals, which is one of the most extensive in the country. These are followed by the Echinoderms, etc. Several cases are devoted to a collection of the marine invertebrates of New England, which is nearly complete. Other cases contain special collections of the shells and corals of the Pacific Coast of America ; of the corals of Bermuda ; of the shells of Florida, etc. The collections are rich in species from the deep-sea dredgings in the Atlantic, but only a small part are on exhibition. Overhead are models, of natural size, of two of the huge Cephalopods of the world : one an Octopus from California, 28 feet in diameter (between the tips of opposite arms), and the other, nearer the door, a species of the Newfoundland seas, related to the Squids, having enormous eyes, and a length from the posterior extremity to the tip of the longer arms, of 42 feet. The models were made for the zoological department by Mr. J. H. Emerton.

The southern exhibition room of the zoological story contains a collection of skeletons in cases on its east and south sides, commencing near the door. • These are deposited by Professor Marsh. The skeletons of Mammals, beginning with man and the apes, occupy all the east side ;

and then come the birds, reptiles, and fishes. The rest of the cases are occupied with collections of Vertebrates, both mounted and alcoholic, and include a nearly complete series of the species inhabiting New Engzand.

The second and third stories have also large laboratories and work rooms, devoted to the department represented in the exhibition rooms of the story. Those of the second or geological story are in charge of Professor Marsh; and those of the third or zoological story, besides serving for work rooms, are for the laboratory exercises and instruction of students in General Zoology under Professor Verrill, and in Biology and Comparative Anatomy under Professor S. I. Smith. These rooms contain also large collections of specimens arranged in drawers and trays, which are open to special students in the department.

In the fourth story there is a large Archaeological collection. As the funds of the Museum are restricted to the departments of Mineralogy, Geology, and Zoology, the cases of the old Yale Museum were fitted up for this collection.

The basement is devoted to work rooms and store rooms and contains a vast amount of specimens, in the departments especially of Palaeontology and Zoology. This part of the building is closed to visitors.

The exhibition rooms of the Museum are open between 9 A. M. and 6 P. M., except in the winter, when the hours are from 9 A. M. to 5 P. M. The janitor of the building is Mr. J. Rice, 92 High street.

THE OBSERVATORY

BOARD OF MANAGERS

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THE OBSERVATORY has been built from the avails of the gift of the late Hon. Oliver F. Winchester, of New Haven, on land given by the late Mrs. Cornelia L. Hillhouse and her daughters. The principal astronomical instruments now in use are a six-inch Heliometer constructed by Messrs. Repsold, of Hamburg, and an eight-inch Equatorial by Messrs. Grubb, of Dublin, given by Mr. Edward M. Reed, of New Haven.

Besides its ordinary astronomical work, the Observatory maintains two public services. Continuous time-signals are transmitted from the distributing clock at the Observatory to the railroads and other parties. The Observatory offers facilities also to persons interested in accurate Thermometry for the comparison of thermometers with standard instruments.

For the proper performance of these services the following equipment is in use :

1. Standard clocks, a transit instrument, chronographs, and the accessories for refined accuracy in the determination and transmission of time.

2. Apparatus for research and comparison in Thermometry, including a collection of the best thermometers obtainable of the foreign makers and observatories which devote special attention to thermometric standards.

Descriptive circulars of the Thermometric service may be obtained by addressing the Observatory.

UNIVERSITY PRIZES

The JOHN A. PORTER PRIZE, of the value of two hundred and fifty dollars, established by the Kingsley Trust Association in 1872, is offered for the best English Essay on a prescribed subject. Competing essays must be handed in within one week after the close of the Spring Recess, and the award will be announced on Commencement Day. Any person who has been pursuing a regular course for a degree in any Department during the whole of the current College year, may compete for this prize. If none of the competing essays is of sufficient merit, the prize will not be awarded.

The subjects for essays in 1889 are as follows:—

1. An Account of the English Metrical Arthurian Romances, with an Estimate of their Poetical Merit.
2. The Development of the Modern Newspaper.
3. The Future of Austria.
4. Frederick II.
5. Can Evolution indicate an Ethical End? Is there any basis for Morality in Evolution?
6. The Development of Political Ideas in the United States since 1864, as shown by changes made in our State Constitutions.
7. History and Tendencies of International Conventions.
8. The Presidency of the French Republic.
9. Combinations and Trusts.
10. Organization of Production and of Laborers in the Byzantine Empire. (Investigate the history and fortunes of the artisan class at Constantinople under the organizations imposed upon them by the laws of the fourth and fifth centuries.)

The Essays for 1889 will be due on Wednesday, May 1, at the office of the editor of the *New Englander*, No. 105 Grove street, New Haven.

The COBDEN CLUB SILVER MEDAL is awarded annually to that undergraduate of either the Academical or the Scientific Department who shows the greatest proficiency in the elements of Political Economy.

LISTS OF STUDENTS

DEPARTMENT OF PHILOSOPHY AND THE ARTS

COURSES OF GRADUATE INSTRUCTION

Frank Frost Abbott, B.A. } Yale University, 1883	<i>New Haven, Conn.</i>	153 F.
Herbert Austin Aikins, B.A. } University of Toronto, 1887	<i>Toronto, Canada</i>	74 Howe st.
Edward Francis Ayres, B.A. } Yale University, 1888	<i>New Canaan, Conn.</i>	19 Home pl.
Louis Lawrence Barnum, LL.B. } Yale University, 1886	<i>Thompsonville, Conn.</i>	16 S. H.
Carleton Lewis Brownson, B.A. } Yale University, 1887	<i>New Canaan, Conn.</i>	318 Orange st.
William Tillinghast Bull, PH.B. } Yale University, 1888	<i>Newport, R. I.</i>	131 Grove st.
Edwin Palmer Burtt, B.A. } Colby University, 1884	<i>Buxton Center, Me.</i>	131 Howe st.
Edward Capps, B.A. } Illinois College, 1887	<i>Jacksonville, Ill.</i>	121 York st.
George Robert Carter, PH.B. } Yale University, 1888	<i>Honolulu, H. I.</i>	43 College st.
Frederick Lincoln Chase, B.A. } University of Colorado, 1886	<i>Boulder, Col.</i>	297 York st.
Mark Wilson Chunn, B.A. } Western Maryland College, 1882, PH.D. Yale University, 1888	<i>Mechanicsville, Md.</i>	34 E.
Oliver Ellsworth Cramer, B.A. } Augustana College, 1888	<i>Rock Island, Ill.</i>	20 Pearl st.
Clark Eugene Crandall, M.A. } Milton College, 1886	<i>New Haven, Conn.</i>	109 Elm st.
Wilbur Lucius Cross, B.A. } Yale University, 1885	<i>Gurleyville, Conn.</i>	153 F.
Charles Edward Curtis, PH.B. } Yale University, 1888	<i>New Haven, Conn.</i>	138 Dwight st.
Ira William Davenport, B.A. } Illinois College, 1885	<i>Jacksonville, Ill.</i>	121 York st.
George William Davis, } Victoria University, England, 1880	<i>Huron, N. Y.</i>	109 Elm st.

Charles Allen Dinsmore, { a.d. Yale University, 1888 }	Stowe, Vt.	Whitneyville
Orville Henry Drake, M.A. { Bates College, 1884 }	Ashland, N. H.	55 Prospect st.
Judson Schultze Dutcher, B.A. { Yale University, 1886 }	Ellenville, N. Y.	187 C.
Henry Hays Ellis, PH.B. { Yale University, 1888 }	Oxford, Me.	285 York st.
Oliver Cummings Farrington, M.S. { Maine State College, 1888 }	Portland, Me.	55 Prospect st.
John Ellis Field, PH.B. { Yale University, 1888 }	Denver, Col.	391 Temple st.
Irving Fisher, B.A. { Yale University, 1888 }	New Haven, Conn.	115 Park st.
George Barber Fowler, B.A. { Yale University, 1888 }	Thompsonville, Conn.	Thompsonville
Ernest Leonard Fox, B.A. { Syracuse University, 1881 }	Evanston, Ill.	553 Howard av.
Harlow Stearns Gale, B.A. { Yale University, 1885 }	Minneapolis, Minn.	44 S. M.
George Stephen Goodspeed, B.A. { Brown University, 1880 }	New Haven, Conn.	13 Park st.
Matthew Griswold, Jr., PH.B. { Yale University, 1888 }	Erie, Pa.	38 High st.
Alfred Hand, Jr., B.A. { Yale University, 1888 }	Scranton, Pa.	128 High st.
John Edward Herman, B.D. { Yale University, 1888 }	Warsaw, N. Y.	19 E.
Charles Horswell, B.A. { Northwestern University, 1884 }	Evanston, Ill.	515 Howard av.
Edmund Otis Hovey, B.A. { Yale University, 1884 }	Waterbury, Conn.	Waterbury
Fritz Jacobson, B.A. { Augustine College, 1885 }	Rockford, Ill.	49 Winchester av.
Cyrus Field Judson, PH.B. { Yale University, 1888 }	New York City	86 Wall st.
John Couzu Kebabian, B.A. { Yale University, 1888 }	Rodosto, Turkey	9 Library st.
Felix Kleeberg, PH.B. { Yale University, 1888 }	New Haven, Conn.	14 Orange st.
William Otterbein Krohn, { Western College }	Indianapolis, Ind.	125 Shelton av.
Frank Dodge Leffingwell, B.A. { Yale University, 1887 }	Montclair, N. J.	55 Prospect st.
Frank Ranney Luckey, B.S. { Cornell University, 1882 a.d. Yale University, 1888 }	New Haven, Conn.	21 Eld st.
Frederic William Mar, B.A. { Yale University, 1888 }	West Haven, Conn.	West Haven

Fred W. C. Meyer, } Rochester Theological Seminary }	<i>New Haven, Conn.</i> 12 Broad st.
John Hamilton Miller, B.A. } Amherst College, 1888 }	<i>Evanston, Ill.</i> 515 Howard av.
Frederick Wightman Moore, B.A. } Yale University, 1886 }	<i>New Haven, Conn.</i> 409 Temple st.
Rikizo Nakashima, B.D. } Yale University, 1887 }	<i>Kyoto, Japan</i> 104 w.
Charles Norris, Jr., PH.B. } Yale University, 1888 }	<i>New York City</i> 250 York st.
Hanns Oertel, M.A. } Yale University, 1888 }	<i>Meissen, Germany</i> 31 York sq.
Selden Yale Osborn, PH.B. } Yale University, 1888 }	<i>New Haven, Conn.</i> 131 Grove st.
Gaylord Hawkins Patterson, B.A. } Ohio Wesleyan University, 1888 }	<i>Slippery Rock, Pa.</i> 312 Elm st.
John Owen Pierce, B.A. } Westminster College, Mo., 1873 }	<i>Frankfort, O.</i> 103 Water st.
Frank Chamberlin Porter, M.A. } Beloit College, 1880, } B.D. Yale University, 1887 }	<i>Beloit, Wisc.</i> 99 w.
William Ezra Roop, B.A. } Western Maryland College, 1886 }	<i>Westminster, Md.</i> 125 Dwight st.
Eben Charles Sage, B.A. } Shurtleff College, 1878 }	<i>New Haven, Conn.</i> 57 Prospect st.
Frank Knight Sanders, M.A. } Ripon College, 1888 }	<i>New Haven, Conn.</i> 331 Temple st.
Thomas Frederic Sanford, B.A. } Yale University, 1888 }	<i>Redding, Conn.</i> 265 Orange st.
James Alward Seymour, PH.B. } Yale University, 1885 }	<i>Auburn, N. Y.</i> A.
Daniel Shepardson, Jr., B.A. } Denison University, 1888 }	<i>Boulder, Col.</i> 297 York st.
Ernest Ellsworth Smith, PH.B. } Yale University, 1888 }	<i>New Haven, Conn.</i> 1018 Chapel st.
Percy Franklyn Smith, PH.B. } Yale University, 1888 }	<i>New Haven, Conn.</i> 46 N. S. H.
Elias Hershey Sneath, M.A. } Lebanon Valley College, 1884, } B.D. Yale University, 1884 }	<i>Farmington, Conn.</i> Farmington
Fred Palmer Solley, B.A. } Yale University, 1888 }	<i>Orange, N. J.</i> 116 w.
Erwin Starr Sperry, PH.B. } Yale University, 1887 }	<i>Ansonia, Conn.</i> S. H.
Amos Alonzo Stagg, B.A. } Yale University, 1888 }	<i>Orange, N. J.</i> Dwight Hall
Frederick Starr, B.A. } Lafayette College, 1882 }	<i>Hanover, Mass.</i> 77 w.
George Stibitz, M.A. } Ursinus College, 1887 }	<i>Lehighon, Pa.</i> 109 Elm st.

George Malcolm Stratton, B.A. } University of California, 1888 }	<i>Oakland, Cal.</i>	102 York sq.
Léon ibn abi Suleiman, } Pensionnat Zaki, Beirut, Syria }	<i>Alexandria, Egypt</i>	131 Howe st.
James Ten Brocke, B.A. } Middlebury College, 1884 }	<i>Panton, Vt.</i>	13 Park st.
Guy Van Gorder Thompson, B.A. } University of Colorado, 1888 }	<i>Boulder, Col.</i>	297 York st.
Herbert Cushing Tolman, B.A. } Yale University, 1888 }	<i>Hanover, Mass.</i>	77 w.
William Conquest Tucker, PH.B. } Yale University, 1888 }	<i>New York City</i>	61 w.
Morgan Walcott, PH.B } Yale University, 1888 }	<i>New York City</i>	A.
Brownlee Robertson Ward, B.A. } Yale University, 1888 }	<i>New Haven, Conn.</i>	138 Temple st.
Wilbert Webster White, B.A. } Wooster University, 1881 }	<i>Wooster, O.</i>	775 State st.
Alfred Mundy Wilson, B.A. } Denison University, 1881 }	<i>New Haven, Conn.</i>	733 Elm st.
Charles Henry Wissner, B.A. } Hampden Sidney College, 1885 }	<i>Fredericksburg, Va.</i>	553 Howard av.
Benjamin Mead Wright, } Bangor Theological Seminary }	<i>Greenwich, Conn.</i>	182 LYC.
Tetsutado Yoshida	<i>Saitama, Japan</i>	35 Howe st.
Kichiro Yuasa, B.D. } Oberlin College, 1888 }	<i>Gunma, Japan</i>	131 Howe st.

GRADUATE STUDENTS, 79

ACADEMICAL DEPARTMENT

(YALE COLLEGE)

SENIOR CLASS

Burr Reeve Abbe, Jr.	<i>Hartford, Conn.</i>	281 L.
William Pope Aiken	<i>Rutland, Vt.</i>	57 S. M.
Joshua Wilson Allen	<i>Hartford, Conn.</i>	A.
William Whitney Ames	<i>Rockville, Conn.</i>	26 S.
William Lucius Armstrong	<i>Chicago, Ill.</i>	120 N.
Henry Cornelius Atkins	<i>Indianapolis, Ind.</i>	105 N.
Arnold Plumer Austin	<i>Philadelphia, Pa.</i>	211 D.
Freeman Davidson Baerman	<i>Gouverneur, N. Y.</i>	189 C.
John Wallace Banks	<i>Guilford, Conn.</i>	124 N.
Clifford Webster Barnes	<i>Pasadena, Cal.</i>	102 York sq.
Donald McLean Barstow	<i>Flushing, N. Y.</i>	131 High st.
Horace Bennet Bartholomew	<i>Pottsville, Pa.</i>	166 F.
John William Beckwith	<i>Chicago, Ill.</i>	282 L.
Ernest Smith Bishop	<i>Guilford, Conn.</i>	88 N. M.
Dwight Walter Bissell	<i>Ahmednagar, India</i>	25 S.
Lester Bradner, Jr.	<i>New Haven, Conn.</i>	55 S. M.
Walter Shaw Brewster	<i>Brooklyn, N. Y.</i>	176 F.
Charles Twing Brooks	<i>Salem, O.</i>	66 W.
Philip Embury Browning	<i>Poughkeepsie, N. Y.</i>	9 S.
Thomas Walter Buchanan	<i>Albany, Vt.</i>	101 N.
Hillhouse Buel	<i>Asheville, N. C.</i>	89 N. M.
Augustus Coburn	<i>Indianapolis, Ind.</i>	232 D.
George Coggill	<i>New York City</i>	234 D.
Albert St.Clair Cook	<i>Hartford, Conn.</i>	227 D.
Howard Copland	<i>Columbus, O.</i>	155 F.
William Herbert Corbin	<i>Hartford, Conn.</i>	Dwight Hall
Safford Arnold Crummey	<i>Poughkeepsie, N. Y.</i>	226 D.
Thomas Mitchel Cullinan	<i>Bridgeport, Conn.</i>	26 S.
John Havemeyer Daniels	<i>Niagara Falls, Ontario, Canada</i>	18 S.
Wm. Chester DeForest Dickinson	<i>New Haven, Conn.</i>	91 N. M.
Thomas Elliott Donnelley	<i>Chicago, Ill.</i>	239 D.
George Perkins Douglas	<i>Minneapolis, Minn.</i>	25 Wall st.
Eugene Henry Dupee	<i>Chicago, Ill.</i>	144 F.
Frederick Wesley Ellis	<i>Ansonia, Conn.</i>	9 S.
Joseph Ralph Ensign	<i>Simsbury, Conn.</i>	239 D.
Joseph Grant Ewing	<i>Harrisburg, Pa.</i>	265 L.
Samuel Herbert Fisher	<i>Cincinnati, O.</i>	62 S. M.
Claude Lamot Forbes	<i>Canastota, N. Y.</i>	226 D.

Leopold Joseph Francke	<i>New York City</i>	237 D.
Albert Myrick Freeman	<i>Provincetown, Mass.</i>	101 N.
John Randolph Galt	<i>Newburgh, N. Y.</i>	237 D.
Edward James Gavegan	<i>New Haven, Conn.</i>	37 S. M.
Charles Otis Gill	<i>Orange, N. Y.</i>	62 S. M.
Porter Beach Godard	<i>North Granby, Conn.</i>	8 S.
John Cornelius Griggs	<i>Centerbrook, Conn.</i>	Dwight Hall
Thomas Hanlon, Jr.	<i>Pennington, N. Y.</i>	91 N. M.
Edward Barrett Hinckley	<i>Northampton, Mass.</i>	47 S. M.
Howland Hoadley	<i>New York City</i>	39 S. M.
Leverett Lord Hull	<i>Cincinnati, O.</i>	211 D.
Robert Watkinson Huntington, Jr.	<i>Hartford, Conn.</i>	104 N.
Arthur May Hyde	<i>Rockville, Conn.</i>	107 N.
Baruch Israeli	<i>New Haven, Conn.</i>	188 C.
Benjamin Willard Jacobs	<i>Denver, Col.</i>	38 S. M.
Arthur Edmands Jenks	<i>Brockton, Mass.</i>	122 N.
James Henry Keefe	<i>Chester, Mass.</i>	216 D.
Charles Foster Kent	<i>Palmyra, N. Y.</i>	277 L.
Charles Sherman King	<i>Wabash, Ind.</i>	134 F.
George Lyman Lamphier	<i>Goshen, Conn.</i>	190 C.
Charles Chandler Griswold Lane	<i>Sandusky, O.</i>	8 S.
Charles William Lefler	<i>Cincinnati, O.</i>	94 N. M.
Milton Marshall Lemer	<i>Harrisburg, Pa.</i>	46 S. M.
Elmer Francis Letcher	<i>Southbridge, Mass.</i>	134 College st.
Fred Nye Lindsay	<i>Troy, N. Y.</i>	84 N. M.
Arthur Mitchell Little	<i>Washington, D. C.</i>	217 York st.
Edward Olaus Loe	<i>Grand Meadow, Minn.</i>	181 LYC.
Joseph Wilson Lucas	<i>Philadelphia, Pa.</i>	225 D.
Robert Lee Luce	<i>Hartwick, N. Y.</i>	216 D.
Eugene Emile McCandliss	<i>Philadelphia, Pa.</i>	278 L.
Joseph Sprigg McMahon	<i>Dayton, O.</i>	233 D.
William Adolphe McQuaid	<i>New Haven, Conn.</i>	181 Orchard st.
Henry Eager Mason	<i>Chicago, Ill.</i>	41 S. M.
William Ross Matson	<i>Hartford, Conn.</i>	42 S. M.
Mark Edward Merrifield	<i>New York City</i>	61 S. M.
John Fuller Appleton Merrill	<i>Portland, Me.</i>	282 L.
William Clifford Moore	<i>New York City</i>	278 L.
Augustus Henry Mosle	<i>New York City</i>	206 D.
Henry Ford Noyes	<i>Georgetown, Mass.</i>	120 N.
John Ball Osborne	<i>Wilkes-Barre, Pa.</i>	220 D.
William Herbert Page	<i>Ironton, O.</i>	163 F.
Frank Ilsley Paradise	<i>Andover, Mass.</i>	138 York st.
Edward Lambe Parsons	<i>Rye, N. Y.</i>	63 S. M.
Charles Cook Paulding	<i>Peekskill, N. Y.</i>	163 F.
George Clarke Peck	<i>Brooklyn, N. Y.</i>	228 D.

Israel Hyman Peres	<i>Memphis, Tenn.</i>	85 N. M.
Gordon Brainerd Pike	<i>Middletown, Conn.</i>	201 D.
Gifford Pinchot	<i>New York City</i>	63 S. M.
Robert Treat Platt	<i>Milford, Conn.</i>	54 S. M.
Samuel Newman Pond	<i>Falls Church, Va.</i>	6 S.
Harry Lathrop Reed	<i>Manchester, Vt.</i>	69 N. M.
Charles G. Reynolds	<i>Wolcott, N. Y.</i>	87 N. M.
Oliver Huntington Richardson	<i>New Britain, Conn.</i>	281 L.
Henry Seymour Robinson	<i>Hartford, Conn.</i>	238 D.
William Hayden Rockwell	<i>New York City</i>	206 D.
James Gamble Rogers	<i>Chicago, Ill.</i>	105 N.
Henry Judson Sage	<i>Cincinnati, O.</i>	64 S. M.
Frederic Henry Sanford	<i>Palmyra, N. Y.</i>	277 L.
William Davis Sawyer	<i>Dover, N. H.</i>	201 D.
Ferdinand Schwill	<i>Cincinnati, O.</i>	106 N.
Edmund Daniel Scott	<i>New Haven, Conn.</i>	6 S.
Frederick Andrew Scott	<i>Terryville, Conn.</i>	88 N. M.
Edward Ewing Sears	<i>Northampton, Mass.</i>	7 S.
Thomas Gaskell Shearman	<i>Brooklyn, N. Y.</i>	53 S. M.
Charles Hitchcock Sherrill	<i>Washington, D. C.</i>	235 D.
Charles Sanford Skilton	<i>Northampton, Mass.</i>	7 S.
Herbert Augustine Smith	<i>Worcester, Mass.</i>	106 N.
Samuel Lewis Smith	<i>Cleveland, O.</i>	225 D.
Langdon Trufant Snipe	<i>Bath, Me.</i>	166 F.
Horace Sheldon Stokes	<i>Detroit, Mich.</i>	238 D.
Lewis Austin Storrs	<i>Hartford, Conn.</i>	124 N.
Joseph Parsons Tuttle	<i>Hartford, Conn.</i>	85 N. M.
John Underhill	<i>Bath, N. Y.</i>	64 S. M.
Charles Abernethy Valentine	<i>New York City</i>	228 D.
Howard Wills Vernon	<i>Brooklyn, N. Y.</i>	233 D.
Horace Fletcher Walker	<i>Detroit, Mich.</i>	61 S. M.
Frederic William Wallace	<i>Ansonia, Conn.</i>	130 Wall st.
Thomas Pinckney Waring	<i>Savannah, Ga.</i>	134 F.
Charles Milnor Washington	<i>Nauesink, N. J.</i>	234 D.
Lewis Sheldon Welch	<i>Hartford, Conn.</i>	104 N.
Hubert Wetmore Wells	<i>Louisville, Ky.</i>	92 N. M.
Philip Patterson Wells	<i>Louisville, Ky.</i>	92 N. M.
DeWitt Clinton West	<i>Lowville, N. Y.</i>	232 D.
Edmund Burr White	<i>Holbrook, Mass.</i>	220 D.
James Thomas Whittlesey	<i>Washington, D. C.</i>	53 S. M.
Howard Hunter Williams	<i>North Adams, Mass.</i>	132 F.
Andrew Ludwig Winters	<i>Reading, Pa.</i>	25 S.
George Washington Woodruff	<i>Scranton, Pa.</i>	69 N. M.
Horace Wylie	<i>Washington, D. C.</i>	235 D.

JUNIOR CLASS

Jacob Jay Abt	<i>Chicago, Ill.</i>	161 York st.
George Loveless Amerman	<i>Syracuse, N. Y.</i>	268 L.
Edgar Ames	<i>St. Louis, Mo.</i>	205 D.
Maximilian Baird	<i>Chicago, Ill.</i>	130 F.
Roger Sherman Baldwin	<i>New Haven, Conn.</i>	204 D.
Frank Pennington Ball	<i>New York City</i>	247 L.
James Robertson Barbour	<i>Montreal, Canada</i>	135 F.
Harry Jenkins Bardwell	<i>Tunkhannock, Pa.</i>	23 S.
Thomas Francis Bayard, Jr.	<i>Wilmington, Del.</i>	222 D.
William Hale Beckford	<i>Beverly, Mass.</i>	192 C.
Frederick Bedell	<i>Montclair, N. J.</i>	151 F.
Albert Bingley Bennett	<i>Williamson, N. Y.</i>	191 C.
Frank Stymets Bishop	<i>New Haven, Conn.</i>	61 Lyon st.
Herbert Morton Bishop	<i>New Haven, Conn.</i>	148 F.
Charles Bemis Bliss	<i>Abington, Conn.</i>	97 N.
Charles Wright Boltwood	<i>New Haven, Conn.</i>	77 Wall st.
Charles Cranston Bovey	<i>Minneapolis, Minn.</i>	218 D.
Frank Eli Bradley	<i>Quincy, Ill.</i>	4 S.
John Williams Brady	<i>Warsaw, N. Y.</i>	43 S. M.
Edward Brooks, Jr.	<i>Philadelphia, Pa.</i>	248 L.
Frank Terry Brooks	<i>New Haven, Conn.</i>	141 Edwards st.
William Thurston Brown	<i>New Bedford, Mass.</i>	A.
George Henry Capen	<i>St. Louis, Mo.</i>	203 D.
Bert Francis Case	<i>Granby, Conn.</i>	72 N. M.
Amasa Day Chaffee	<i>Moodus, Conn.</i>	242 York st.
Howard Dennis Collins	<i>Newport, R. I.</i>	71 N. M.
Arthur Willis Colton	<i>Wayne, Mich.</i>	4 S.
Walter Joseph Connor	<i>New Haven, Conn.</i>	37 S. M.
John White Corwith	<i>Chicago, Ill.</i>	12 S.
Howard Elmer Crall	<i>New York City</i>	263 L.
Robert Dillon Crane	<i>New York City</i>	209 D.
Albert Cushing Crehore	<i>Cleveland, O.</i>	13 S.
John Crosby	<i>Minneapolis, Minn.</i>	218 D.
George Henry Danforth	<i>Madison, N. J.</i>	24 S.
Arthur Pomeroy Day	<i>Hartford, Conn.</i>	256 L.
Walter Alden DeCamp	<i>Cincinnati, O.</i>	133 F.
Walton Dennis	<i>Brooklyn, N. Y.</i>	272 L.
Andrew Glassell Dickinson, Jr.	<i>New York City</i>	165 F.
Clayton Chauncey Dorsey	<i>Chico Springs, N. M.</i>	36 Wall st.
George Wells Dupee	<i>Chicago, Ill.</i>	144 F.
Louis Cazenove duPont	<i>Wilmington, Del.</i>	227 D.
Hamilton Hill Durand	<i>Cleveland, O.</i>	120 York st.
Clark Terry Durant	<i>Albany, N. Y.</i>	30 S.

Charles Dussler	<i>Clyde, N. Y.</i>	28 s.
Charles Albert Ebersole	<i>Cincinnati, O.</i>	170 York st.
Wolcott Webster Ellsworth	<i>Hartford, Conn.</i>	111 York st.
Arthur Espy	<i>Cincinnati, O.</i>	16 s.
John Dorrance Farnham	<i>Wilkes-Barre, Pa.</i>	221 D.
Horace Cheney Foote	<i>New York City</i>	135 F.
Henry Thatcher Fowler	<i>Poughkeepsie, N. Y.</i>	147 F.
George William Gedney	<i>Newburgh, N. Y.</i>	17 Wooster pl.
George Hills Gilman	<i>Hartford, Conn.</i>	1157 Chapel st.
Rodney Lawrence Glisan	<i>Portland, Oregon</i>	14 s.
William Sherman Greene	<i>Brooklyn, N. Y.</i>	209 D.
Elihu Marvin Griswold	<i>Eric, Pa.</i>	204 D.
Charles Humphrey Hamill	<i>Chicago, Ill.</i>	12 s.
Bert Hanson	<i>Great Falls, N. H.</i>	23 s.
William Harmar	<i>Philadelphia, Pa.</i>	258 L.
Reginald Fairfax Harrison	<i>New York City</i>	258 L.
Robert Hartshorne	<i>Highlands, N. Y.</i>	221 D.
Charles Houston Haskell	<i>Norwich, Conn.</i>	263 L.
Lewis Scofield Haslam	<i>Stamford, Conn.</i>	13 s.
George Collier Hitchcock	<i>St. Louis, Mo.</i>	222 D.
George Day Holmes	<i>Montclair, N. Y.</i>	151 F.
Roland Holt	<i>New York City</i>	123 N.
Addison Hills Hough	<i>Cleveland, O.</i>	247 L.
May Humphreys	<i>New York City</i>	256 L.
Joseph Selden Huntington, Jr.	<i>Old Lyme, Conn.</i>	176 F.
George Arthur Hurd	<i>New York City</i>	81 N. M.
Otis King Hutchinson	<i>Chicago, Ill.</i>	242 York st.
John DeCourcy Ireland	<i>New York City</i>	245 L.
Robert Livingston Ireland	<i>New York City</i>	245 L.
James Monfort Irvin	<i>Dayton, O.</i>	168 F.
John Day Jackson	<i>New York City</i>	160 F.
Norman James	<i>Baltimore, Md.</i>	259 L.
Elliott Proctor Joslin	<i>Oxford, Mass.</i>	147 F.
Charles Poole Kellogg	<i>Waterbury, Conn.</i>	259 L.
Chester Henry Keogh	<i>Chicago, Ill.</i>	15 s.
Yale Kneeland	<i>Brooklyn, N. Y.</i>	15 s.
Stephen Hurlburt Kohler	<i>Akron, O.</i>	257 L.
William Alfred Korn	<i>Norwich, Conn.</i>	59 S. M.
George Newton Lawson	<i>Union, Conn.</i>	2 s.
Harriman Willis Lee	<i>Buffalo, N. Y.</i>	255 L.
Charles Fitch Lester	<i>Norwich, Conn.</i>	97 N.
Thomas Jay Lloyd	<i>East Orange, N. Y.</i>	141 F.
James Locke	<i>Buffalo, N. Y.</i>	273 L.
Walter Irenæus Lowe	<i>Whitinsville, Mass.</i>	72 N. M.
William Chittenden Lusk	<i>New York City</i>	172 F.

Abram Garrison McClintock	<i>Allegheny, Pa.</i>	246 L.
William Appleton McConnel	<i>Beaver, Pa.</i>	73 N. M.
Donald McCormick	<i>Harrisburg, Pa.</i>	148 F.
Ralph Augustine McDonnell	<i>New Haven, Conn.</i>	266 Portsea st.
Thomas Edward McEvoy	<i>Hopkinton, Mass.</i>	74 N. M.
John Francis McGuire	<i>Hopkinton, Mass.</i>	273 L.
Henry Smith Mathewson	<i>Pomfret, Conn.</i>	119 N.
Solomon Cristy Mead	<i>Greenwich, Conn.</i>	182 LYC.
Frank Sherman Meara	<i>Cottage City, Mass.</i>	73 N. M.
Robert Hale Merriam	<i>St. Paul, Minn.</i>	248 L.
Knowlton Mixer	<i>Buffalo, N. Y.</i>	165 F.
William Greenwood Morris	<i>New Haven, Conn.</i>	408 Crown st.
Sidney Nelson Morse	<i>North Woodstock, Conn.</i>	107 N.
Harry Loomis Munger	<i>Dayton, O.</i>	214 D.
Edward Lyman Munson	<i>New Haven, Conn.</i>	14 S.
Ashbel Barney Newell	<i>Chicago, Ill.</i>	246 L.
George Nathan Newman	<i>Buffalo, N. Y.</i>	12 Whalley av.
Henry Opdyke	<i>Plainfield, N. J.</i>	24 S.
Willard Parker, Jr.	<i>New York City</i>	262 L.
Herbert Parsons	<i>New York City</i>	262 L.
Richard Truman Percy	<i>New Haven, Conn.</i>	214 D.
George Frederick Peter	<i>St. Louis, Mo.</i>	210 D.
Stowe Phelps	<i>Brooklyn, N. Y.</i>	248 L.
Robert Eston Phyfe	<i>Delhi, N. Y.</i>	219 York st.
Eugene Rockwell Pike	<i>Chicago, Ill.</i>	40 S. M.
Nathan Todd Porter, Jr.	<i>Montclair, N. J.</i>	272 L.
Harry Elbridge Pratt	<i>Chicago, Ill.</i>	137 F.
George Wadsworth Raynes	<i>Charlestown, Mass.</i>	254 York st.
Charles Eliphalet Robbins	<i>Ruskey, N. Y.</i>	192 C.
Frederick William Robinson	<i>Auburn, N. Y.</i>	43 S. M.
Stuart Henry Rowe	<i>New Haven, Conn.</i>	30 Academy st.
Henry Manning Sage	<i>Albany, N. Y.</i>	274 L.
Leonard Cutler Sanford	<i>New Haven, Conn.</i>	216 Crown st.
David Scharps	<i>Newburgh, N. Y.</i>	131 F.
Henry Leo Scheuerman	<i>Griffin, Ga.</i>	131 F.
Ernest Lynde Selden	<i>Hadlyme, Conn.</i>	74 N. M.
Howard Van Doren Shaw	<i>Chicago, Ill.</i>	257 L.
Ralph Martin Shaw	<i>Lexington, Ky.</i>	89 N. M.
Thomas Bond Shaw	<i>Worcester, Mass.</i>	59 S. M.
Charles Alexander Sheldon	<i>Rutland, Vt.</i>	205 D.
Edward Minot Shelton	<i>Litchfield, Conn.</i>	191 C.
John Howard Sherwood	<i>Englewood, N. J.</i>	130 F.
Wallace Delafield Simmons	<i>St. Louis, Mo.</i>	203 D.
Charles Francis Small	<i>Pawtucket, R. I.</i>	119 N.
William Henry Smith	<i>New Haven, Conn.</i>	210 D.

William Howard Smith	<i>Ogden City, Utah</i>	28 S.
Percy Hamilton Stewart	<i>Plainfield, N. J.</i>	241 L.
John Francis Sullivan	<i>New Haven, Conn.</i>	304 Exchange st.
James Willcox Thompson	<i>Bridgeport, Conn.</i>	1157 Chapel st.
Ralph Thompson	<i>Schenectady, N. Y.</i>	242 L.
Albert Arthur Tilney	<i>Plainfield, N. J.</i>	274 L.
Evarts Tracy	<i>Plainfield, N. J.</i>	241 L.
Henry Veeder	<i>Chicago, Ill.</i>	252 L.
James Allen Warner	<i>Albany, N. Y.</i>	242 L.
George Swift Welch	<i>Gowanda, N. Y.</i>	168 F.
William White, Jr.	<i>Drifton, Pa.</i>	172 F.
Albert Jason Willson	<i>Marion, Ind.</i>	252 L.
Joseph Lafon Winchell	<i>New Haven, Conn.</i>	565 Orange st.
Lewis Bartholomew Woodruff	<i>New York City</i>	266 L.
Henry Sterne Woodward	<i>Washington, D. C.</i>	16 S.
George Dallas Yeomans	<i>East Aurora, N. Y.</i>	255 L.
Samuel Albert York, Jr.	<i>New Haven, Conn.</i>	139 Edwards st.
		JUNIORS, 150

SOPHOMORE CLASS

Edward Walter Abell	<i>North Franklin, Conn.</i>	116 N.
Hildreth James Ackroyd	<i>Albany, N. Y.</i>	108 N.
George Irving Adams	<i>Westborough, Mass.</i>	41 High st.
Thomas Gove Adams	<i>New Haven, Conn.</i>	6 Prospect pl.
Alfred Lawrence Aiken	<i>Norwich, Conn.</i>	270 L.
Matthias Charles Arnot	<i>Elmira, N. Y.</i>	240 D.
Grosvenor Atterbury	<i>New York City</i>	249 L.
Gurdon Franklin Bailey	<i>Groton, Conn.</i>	116 N.
Albert Ruggles Baker	<i>Hartford, Conn.</i>	34 S. M.
Ernest Hickok Baldwin	<i>Cheshire, Conn.</i>	200 York st.
Cecil Kittredge Bancroft	<i>Andover, Mass.</i>	279 L.
Albert Hampton Barclay	<i>Pittsburgh, Pa.</i>	35 High st.
John Sanford Barnes, Jr.	<i>New York City</i>	59 W.
James Foote Barnett	<i>Grand Rapids, Mich.</i>	29 S.
Walter Alden Barrows	<i>Westborough, Mass.</i>	48 S. M.
William Tenney Bartley	<i>Bridgeport, Conn.</i>	45 S. M.
Frank Sheridan Benninghoff	<i>Clyde, N. Y.</i>	3 S.
Louis Frederic Holbrook Betts	<i>New York City</i>	139 Elm st.
David Lane Billings	<i>New York City</i>	162 F.
Henry Mortimer Billings	<i>New York City</i>	1010 Chapel st.
William Edward Billings	<i>New York City</i>	1010 Chapel st.

Walter Kissam Birdsall	<i>Jersey City, N. J.</i>	159 F.
Frank Sandford Blair	<i>Angelica, N. Y.</i>	100 N.
James Kingsley Blake	<i>New Haven, Conn.</i>	361 Temple st.
Elijah George Boardman	<i>Cleveland, O.</i>	254 Crown st.
John Alden Bovey	<i>Minneapolis, Minn.</i>	31 S.
Joseph Bowden, Jr.	<i>New Haven, Conn.</i>	122 Rosette st.
William Lewis Bradley	<i>New Haven, Conn.</i>	139 Chestnut st.
Charles Edwin Brainard	<i>Hartford, Conn.</i>	154 F.
John Matthews Brenner	<i>Dayton, O.</i>	146 F.
George Stephenson Brewster	<i>New York City</i>	145 F.
James Wallace Broatch	<i>Omaha, Nebr.</i>	1002 Chapel st.
Benjamin West Bonney Brown	<i>New York City</i>	261 L.
Charles Marshall Brown	<i>Pittsburgh, Pa.</i>	179 LYC.
Francis Theodore Brown	<i>Troy, N. Y.</i>	108 N.
William Arthur Brown	<i>Fitchburg, Mass.</i>	139 Elm st.
John Henry Buck	<i>Hartford, Conn.</i>	17 S.
John Lee Bunce	<i>Hartford, Conn.</i>	161 F.
Curtis Clark Bushnell	<i>New Haven, Conn.</i>	19 Perkins st.
Levi Ives Bushnell	<i>New Haven, Conn.</i>	49 Howe st.
Gouverneur Calhoun	<i>Chicago, Ill.</i>	124 W.
Charles Gibbs Carter	<i>Titusville, Pa.</i>	1010 Chapel st.
Ernest Chadwick	<i>Lyme, Conn.</i>	1173 Chapel st.
Starling Winston Childs	<i>Pittsburgh, Pa.</i>	217 D.
Alfred Mainwaring Coats	<i>Providence, R. I.</i>	162 F.
Duane Phillips Cobb	<i>Kankakee, Ill.</i>	1002 Chapel st.
Samuel Colgate, Jr.	<i>Orange, N. J.</i>	231 D.
Charles Parsons Cooley	<i>Hartford, Conn.</i>	231 D.
William Russell Cone Corson	<i>Hartford, Conn.</i>	154 F.
John Joughin Cox	<i>Bedford, N. Y.</i>	63 W.
Frank Crawford	<i>Colebrook, N. H.</i>	65 N. M.
Harvey Williams Cushing	<i>Cleveland, O.</i>	60 W.
William Sage Dalzell	<i>Pittsburgh, Pa.</i>	183 LYC.
Edgar William Danner	<i>Paterson, N. J.</i>	10 S.
Henry Murray Dater	<i>Brooklyn, N. Y.</i>	64 High st.
Carroll Preston Davis	<i>Pittsburgh, Pa.</i>	138 F.
Clarence Seward Davis	<i>Jersey City, N. J.</i>	139 F.
William Beach Dean	<i>New York City</i>	1002 Chapel st.
Lyle Alexander Dickey	<i>Haiku, Maui, H. I.</i>	56 S. M.
Frank Ayer Dillingham	<i>Summit, N. J.</i>	1010 Chapel st.
John Wesley Doane, Jr.	<i>Chicago Ill.</i>	280 L.
Edward Payson Drew	<i>McIndoes Falls, Vt.</i>	60 S. M.
Henry Dunnell	<i>New York City</i>	1 S.
Richard Bancker Duyckinck, Jr.	<i>Brooklyn, N. Y.</i>	10 S.
Charles Russell Ely	<i>Frederick City, Md.</i>	156 F.
Malcolm Monteith Ely	<i>Elyria, O.</i>	231 York st.

Joe Garner Estill	Winchester, Tenn.	43 Whalley av.
James Eugene Farmer	Cleveland, O.	1010 Chapel st.
Harry Tristram Ferris	Riverside, Conn.	22 S.
Parnell Ellis Fisher	Hope Valley, R. I.	49 S. M.
Russell Kennedy Forsyth	Allegheny, Pa.	217 D.
Reginald Foster	New York City	253 L.
Raymond Hilliard Gage	Dover, N. J.	60 S. M.
Nathan Glicksman	Chippewa Falls, Wisc.	164 F.
De Forest Grant	New York City	1010 Chapel st.
Frederic William Grau	Brooklyn, N. Y.	82 N. M.
William Phillips Graves	Andover, Mass.	279 L.
Ashbel Green, Jr.	New York City	208 D.
Paul Ecoff Greer	Chicago, Ill.	253 L.
Franklin Underwood Gregory	Brooklyn, N. Y.	178 LYC.
Hippolyte Washington Gruener	New Haven, Conn.	39 Whiting st.
Thomas Hackett Guy	Troy, N. Y.	149 F.
Stansbury Tiffany Hager	Brooklyn, N. Y.	212 D.
Edwin Victor Hale	Cleveland, O.	271 L.
Charles Howard Hall	Exeter, N. H.	48 S. M.
Lewis Carroll Hall	New Canaan, Conn.	56 Whalley av.
Lane Schofield Hart	Harrisburg, Pa.	164 F.
Theodore Stuart Hart	Farmington, Conn.	136 College st.
Perry Williams Harvey	Cleveland, O.	60 W.
George Pickard Hawkes	New Haven, Conn.	314 Crown st.
Joseph Eugene Hedges	Oregon City, Oregon	186 C.
George Henry Hefflon	Deep River, Conn.	20 S.
Joseph Rogers Herod	Indianapolis, Ind.	75 N. M.
Russell Day Hill	Chicago, Ill.	9 Library st.
William Thurston Hincks	Bridgeport, Conn.	65 N. M.
George Walter Hodges	Bristol, Conn.	43 Whalley av.
Frank Sheridan Hoefler	Ilion, N. Y.	1010 Chapel st.
Herbert Wolcott Holcomb	Portland, Oregon	1010 Chapel st.
Louis Lawton Hopkins	Boston, Mass.	1002 Chapel st.
Gerard Beekman Hoppin	New York City	59 W.
Edward Franklin Horr	Bridgeport, Conn.	45 S. M.
Hampton Pierson Howell	West Hampton Center, N. Y.	35 High st.
Charles Prentiss Howland	New York City	1010 Chapel st.
James Coleman Ford Huntington	New York City	332 Temple st.
Robert Palmer Huntington, Jr.	New York City	332 Temple st.
Harry Cannon Hurd	Cleveland, O.	249 L.
Francis deLacey Hyde	Plainfield, N. J.	219 D.
Leland Ingersoll	Cleveland, O.	208 D.
Charles Samuel Ingham	Saybrook, Conn.	186 C.
Edward Swift Isham, Jr.	Chicago, Ill.	161 F.
Stuart Dodge Jessup	Beyroust, Syria	103 N.

Sherman Skinner Jewett	<i>Buffalo, N. Y.</i>	229 D.
Frederick Morgan Johnson	<i>Norwich, Conn.</i>	270 L.
Vertner Kenerson	<i>Somerville, Mass.</i>	1 TR.
Edward Learned Kernochan	<i>Pittsfield, Mass.</i>	254 Crown st.
Frederick Strong Kimball	<i>Hartford, Conn.</i>	254 L.
Howard Thayer Kingsbury	<i>New York City</i>	63 W.
Lewis Taylor Knox	<i>New Castle, Pa.</i>	157 F.
George Shoemaker LaBar	<i>New Haven, Conn.</i>	236 Crown st.
Howard LaField	<i>Bridgeport, Conn.</i>	19 Wooster pl.
Joseph Langdon	<i>Plymouth, Conn.</i>	146 F.
Albert Lee	<i>New York City</i>	280 L.
William Josiah Leverett	<i>Binghamton, N. Y.</i>	103 N.
Theodore Nelson Lillagore	<i>Philadelphia, Pa.</i>	49 S. M.
Joseph Potts Lloyd, Jr.	<i>East Orange, N. J.</i>	193 C.
Harry Long	<i>Wilkes-Barre, Pa.</i>	64 High st.
Edward Nathaniel Loomis	<i>Brooklyn, N. Y.</i>	152 F.
John Frederic McBean	<i>Chicago, Ill.</i>	203 York st.
Norman McClintock	<i>Pittsburgh, Pa.</i>	180 LYC.
Walter McClintock	<i>Pittsburgh, Pa.</i>	180 LYC.
Robert Gardner McClung	<i>Knoxville, Tenn.</i>	143 F.
Malcolm MacLear	<i>Wilmington, Del.</i>	159 F.
Edward Augustus Manice	<i>New York City</i>	1142 Chapel st.
Charles Capron Marsh	<i>Rahway, N. J.</i>	1010 Chapel st.
Abraham Loeb May	<i>Brooklyn, N. Y.</i>	137 Meadow st.
Lafayette Benedict Mendel	<i>Delhi, N. Y.</i>	423 Temple st.
William Revell Moody	<i>Northfield, Mass.</i>	132 F.
Samuel Wylie Black Moorhead	<i>Pittsburgh, Pa.</i>	179 LYC.
Samuel Benjamin Morison	<i>Minneapolis, Minn.</i>	224 D.
Sherman Morse	<i>Canandaigua, N. Y.</i>	149 F.
Wallace Simon Moyle	<i>Sharon, Mass.</i>	3 S.
Winthrop Sargent Gilman Noyes	<i>St. Paul, Minn.</i>	145 F.
Frank Richard Oastler	<i>New York City</i>	254 L.
Harry Leroy Pangborn	<i>Jersey City, N. J.</i>	139 F.
Amasa Junius Parker, 3d	<i>Albany, N. Y.</i>	68 N. M.
Willis Nathaniel Parker	<i>Niantic, Conn.</i>	297 George st.
Clifford Ives Parshley	<i>Middletown, Conn.</i>	167 F.
Charles Orrin Penfield	<i>Delhi, N. Y.</i>	35 High st.
Samuel Fowler Phelps	<i>White Hall, Ky.</i>	261 L.
John Franklin Plummer, Jr.	<i>New York City</i>	230 D.
Robert Watson Pomeroy	<i>Auburn, N. Y.</i>	240 D.
William Frederick Poole, Jr.	<i>Evanston, Ill.</i>	29 S.
Henry Riggs Rathbone	<i>Albany, N. Y.</i>	1002 Chapel st.
Albert Merriman Reed	<i>Manchester, Vt.</i>	56 S. M.
Adelbert Lee Reynolds	<i>Waterloo, N. Y.</i>	100 N.
William Castle Rhodes	<i>Cleveland, O.</i>	271 L.

George Phelps Robbins	<i>New York City</i>	260 L.
Allan Gold Robinson	<i>Scranton, Pa.</i>	1 S.
Frederick Harvey Robinson	<i>Corning, N. Y.</i>	82 N. M.
William Goodsell Rockefeller	<i>New York City</i>	230 D.
William Drown Rorer	<i>Philadelphia, Pa.</i>	159 York st.
Arthur Benedict Russell	<i>South Norwalk, Conn.</i>	113 N.
Erastus Dean Ryder	<i>Plainfield, N. J.</i>	193 C.
Francis Williams Sacket	<i>Cape Vincent, N. Y.</i>	219 D.
William Henry St. John	<i>Hartford, Conn.</i>	1010 Chapel st.
Daniel Seales, Jr.	<i>Cleveland, O.</i>	107 York st.
John Barry Sears	<i>Chicago, Ill.</i>	70 Grove st.
Samuel Carter Shaw	<i>Redding Ridge, Conn.</i>	96 N. M.
Henry King Sheldon, Jr.	<i>Brooklyn, N. Y.</i>	1079 Chapel st.
Edward Francis Simms	<i>Paris, Ky.</i>	215 D.
William Erskine Simms, Jr.	<i>Paris, Ky.</i>	215 D.
Hubbard Taylor Simpson	<i>Winchester, Ky.</i>	11 S.
Francis Louis Slade	<i>New York City</i>	1010 Chapel st.
Clement Grubb Smith	<i>Joanna Furnace, Pa.</i>	11 S.
George Ferguson Smith	<i>Andover, Mass.</i>	1010 Chapel st.
Herbert Knox Smith	<i>Hartford, Conn.</i>	36 College st.
Ray Burdick Smith	<i>Lincklaen, N. Y.</i>	129 F.
William Griswold Smith	<i>Toledo, O.</i>	175 F.
George Howard Street	<i>Exeter, N. H.</i>	113 N.
Egerton Swartwout	<i>Stamford, Conn.</i>	17 S.
George Sherman Talcott	<i>New Britain, Conn.</i>	20 S.
Daniel Gleason Tenney	<i>New York City</i>	178 LVC.
William Nevin Thatcher	<i>Pueblo, Col.</i>	129 F.
Samuel Clifton Thompson	<i>Pottsville, Pa.</i>	32 S.
Edward Allen Thurber	<i>Syracuse, N. Y.</i>	268 L.
John Quillin Tilson	<i>Clenr Branch, Tenn.</i>	64 High st.
John Barnes Townsend	<i>Silver Cliff, Col.</i>	224 D.
Alliene Wetmore Treadwell	<i>New Castle, Pa.</i>	27 S.
Luther Henry Tucker, Jr.	<i>Albany, N. Y.</i>	158 F.
Harry Hallam Tweedy	<i>Binghamton, N. Y.</i>	32 S.
Clifford Gray Twombly	<i>Boston, Mass.</i>	158 F.
Frederick Collin Walcott	<i>New York Mills, N. Y.</i>	31 S.
Leonard Eugene Wales, Jr.	<i>Wilmington, Del.</i>	157 F.
George Stewart Walton	<i>Salem, O.</i>	152 F.
George Huntington Webster, Jr.	<i>Chicago, Ill.</i>	138 F.
Hanford Smith Weed	<i>New Canaan, Conn.</i>	1079 Chapel st.
Edwin Stanley Welles	<i>Newington, Conn.</i>	90 N. M.
Ernest Hubbard Wells	<i>Louisville, Ky.</i>	27 S.
Henry Crofut White	<i>New York City</i>	229 D.
Frederic Harrison Williams	<i>Brooklyn, N. Y.</i>	231 York st.
Henry Lane Williams	<i>Hartford, Conn.</i>	156 F.

Charles Strong Witbeck	<i>Detroit, Mich.</i>	1010 Chapel st.
Glen Wright	<i>Cincinnati, O.</i>	260 L.
William Denison Young	<i>New York City</i>	124 W.
Ira Platt Younglove	<i>Chicago, Ill.</i>	9 Library st.
SOPHOMORES, 205		

FRESHMAN CLASS

Harry Allen Grant Abbe	<i>Hartford, Conn.</i>	250 L.
Bernard Melzar Allen	<i>Walpole, Mass.</i>	110 N.
Benjamin Latham Armstrong	<i>New London, Conn.</i>	165 York st.
Clarence Willis Austin	<i>Suffield, Conn.</i>	140 Shelton av.
Harry Eugene Avery	<i>Detroit, Mich.</i>	254 York st.
George Sherwin Clarke Badger	<i>Boston, Mass.</i>	203 York st.
Andrew Jackson Balliet	<i>Lehigh, Pa.</i>	127 N.
Frank Melville Barber	<i>Wallingford, Conn.</i>	35 High st.
Arthur Seth Barnes	<i>Bristol, Conn.</i>	80 N. M.
Charles Joseph Bartlett	<i>Barton Landing, Vt.</i>	66 N. M.
Hugh Aiken Bayne	<i>New Orleans, La.</i>	76 Wall st.
Benjamin Franklin Bedford, Jr.	<i>Paris, Ky.</i>	53 Prospect st.
Howbert Billman	<i>Killingworth, Conn.</i>	127 N.
Howard Morton Biscoe	<i>Westborough, Mass.</i>	77 N. M.
Frederic Courtney Bishop	<i>West Stratford, Conn.</i>	79 N. M.
Edward Clarence Bissell	<i>Lakeville, Conn.</i>	22 S.
Walter Phelps Bliss	<i>New York City</i>	233 York st.
Edward Boltwood	<i>Pittsfield, Mass.</i>	254 York st.
William Bradford Bosley	<i>Livonia, N. Y.</i>	29 Broadway
Arthur Stone Brackett	<i>Hartford, Conn.</i>	79 N. M.
Fred Clark Gallup Bronson	<i>Norwich, Conn.</i>	128 N.
Oliver Hart Bronson	<i>New York City</i>	109 High st.
Edward Wells Brown	<i>Waltham, Mass.</i>	113 York st.
Lawrence Edward Brown	<i>New York City</i>	41 High st.
Preston Brown	<i>Louisville, Ky.</i>	173 F.
Stanley Gano Burt	<i>Cincinnati, O.</i>	254 Crown st.
James Trowbridge Carr	<i>Dubuque, Iowa</i>	265 L.
John Foster Carr, Jr.	<i>New York City</i>	200 York st.
Alfred Bruce Chace	<i>Hudson, N. Y.</i>	266 York st.
William Genung Chase	<i>Eddytown, N. Y.</i>	90 N. M.
Howell Cheney	<i>South Manchester, Conn.</i>	90 High st.
Knight Dexter Cheney, Jr.	<i>South Manchester, Conn.</i>	90 High st.
Paul Ripley Clark	<i>Auburn, N. Y.</i>	93 N. M.
Ezekiel Field Clay	<i>Paris, Ky.</i>	159 York st.
Junius Brutus Clay	<i>Paris, Ky.</i>	159 York st.
William Clendenin	<i>Cincinnati, O.</i>	266 York st.

George Lawton Colt	<i>Brooklyn, N. Y.</i>	117 Elm st.
George Wetmore Colles, Jr.	<i>Morristown, N. Y.</i>	233 York st.
Richard Storrs Colton	<i>Brooklyn, N. Y.</i>	113 York st.
Elisha Hilliard Cooper	<i>New Britain, Conn.</i>	21 Wall st.
Henry Graham Crocker	<i>Sarnia, Ontario, Canada</i>	219 York st.
Benjamin Lewis Crosby	<i>Halcott Center, N. Y.</i>	1079 Chapel st.
Stanley Douglas Curran	<i>Utica, N. Y.</i>	393 Temple st.
William Daniels	<i>Denver, Col.</i>	1173 Chapel st.
James Stevens Darcy	<i>Springfield, Mass.</i>	270 George st.
Arthur Louis Day	<i>Westborough, Mass.</i>	77 N. M.
Clive Hart Day	<i>Hartford, Conn.</i>	142 F.
Albert Grant Dingley	<i>Lewiston, Me.</i>	115 Elm st.
Edward Howard Dodd	<i>Summit, N. Y.</i>	433 Temple st.
Richard Gardner Eaton	<i>Wakefield, Mass.</i>	126 N.
Percy Coe Eggleston	<i>New London, Conn.</i>	140 F.
Roy Knight Farwell	<i>Freeport, Ill.</i>	140 F.
Percy Finlay	<i>Memphis, Tenn.</i>	156 Grove st.
Wilbur Parkhurst Fish	<i>Elmira, N. Y.</i>	269 L.
Otis Harrison Fisk	<i>Covington, Ky.</i>	146 College st.
Edward Henry Floyd-Jones	<i>South Oyster Bay, N. Y.</i>	270 Crown st.
Hiram Fobes	<i>Monterey, Mass.</i>	84 N. M.
Elias Fox	<i>Corsicana, Tex.</i>	601 Chapel st.
Everett Dwight Francis	<i>West Hartford, Conn.</i>	1157 Chapel st.
William Buell Franklin	<i>Lancaster, Pa.</i>	170 York st.
Harrison Barber Freeman	<i>Hartford, Conn.</i>	226 Crown st.
Charles Hamilton Frost	<i>Plainfield, N. Y.</i>	7 Library st.
Pierpont Fuller	<i>New Haven, Conn.</i>	145 Olive st.
Merrill Williams Gallaway	<i>New York City</i>	238 York st.
Montgomery Gibson	<i>New Orleans, La.</i>	A.
George Herbert Girty	<i>Cleveland, O.</i>	84 Wall st.
Charles Andrew Graham	<i>Denver, Col.</i>	39 Lynwood st.
Fred Everett Grant	<i>Brooklyn, N. Y.</i>	1173 Chapel st.
Henry Solon Graves	<i>Andover, Mass.</i>	174 F.
Francis Hayt Griffin	<i>Springfield, Mass.</i>	1136 Chapel st.
Charles Sherman Haight	<i>Brooklyn, N. Y.</i>	154 Grove st.
William Cuthbert Hall, Jr.	<i>Louisville, Ky.</i>	173 F.
Warner Harrison	<i>Columbus, O.</i>	170 York st.
Henry Saunders Haskell	<i>Norwich, Conn.</i>	128 N.
William Stockbridge Haskell	<i>West Falmouth, Me.</i>	285 York st.
Ferdinand Albert Hauslein	<i>Genoa, Ill.</i>	29 High st.
Logan Hay	<i>Springfield, Ill.</i>	1090 Chapel st.
Newell Matson Hayden	<i>Denver, Col.</i>	39 Lynwood st.
Frederic Asbury Hill	<i>Norwalk, Conn.</i>	238 York st.
Donald Rose Hinckley	<i>Northampton, Mass.</i>	116 High st.
Henry Barrett Hinckley	<i>Northampton, Mass.</i>	116 High st.

Frederick Wallis Hinkle	<i>Cincinnati, O.</i>	1161 Chapel st.
Charles Revell Holden	<i>Chicago, Ill.</i>	1138 Chapel st.
Burton Page Hollister	<i>Cincinnati, O.</i>	27 High st.
George Buell Hollister	<i>Rutherford, N. J.</i>	177 F.
Sidney Hosmer	<i>New York City</i>	407 Orange st.
Willard Evans Hoyt	<i>Stamford, Conn.</i>	166 York st.
Arthur Carter Hume	<i>Poughkeepsie, N. Y.</i>	24 Home pl.
Daniel Trumbull Huntington	<i>Hartford, Conn.</i>	251 L.
Howard Huntington	<i>Plainfield, N. J.</i>	125 N.
James William Husted, Jr.	<i>Peekskill, N. Y.</i>	38 Lynwood st.
James W. D. Ingersoll	<i>Marengo, Ill.</i>	111 York st.
William Crane Ivison	<i>New York City</i>	177 F.
Pierre Jay	<i>New York City</i>	65 Whitney av.
Isaac Hallam Jenney	<i>New York City</i>	166 York st.
Elliot Grant Johnson	<i>Moosup, Conn.</i>	111 N.
Alfred Henry Jones	<i>St. Louis, Mo.</i>	1090 Chapel st.
Howard Clifford Joyce	<i>Bridgeport, Conn.</i>	A.
Frank Arthur Keller	<i>Fort Plain, N. Y.</i>	109 N.
Harry Howell Kennedy	<i>Syracuse, N. Y.</i>	269 L.
Henry Martindale Kidd	<i>Albany, N. Y.</i>	270 Crown st.
William Lloyd Kitchel	<i>New Haven, Conn.</i>	331 Temple st.
Paul Klimpke	<i>Hartford, Conn.</i>	66 N. M.
George Gray Knowles	<i>Wilmington, Del.</i>	146 College st.
Frederick Johnstone Lane	<i>New York City</i>	120 York st.
Sidney Locock Lasell	<i>Orange, N. J.</i>	1079 Chapel st.
Philip Reynolds Leavenworth	<i>Castleton, Vt.</i>	67 N. M.
Arthur Franklin Lewis	<i>Bozeman, Mont.</i>	237 Dixwell av.
John Frederick Lorange	<i>New Haven, Conn.</i>	93 N. M.
Daniel Lord, 3d	<i>New York City</i>	109 Wall st.
Arthur Lovell	<i>Plainfield, N. J.</i>	116 College st.
Harry Winters Luce	<i>Scranton, Pa.</i>	78 N. M.
Harry Stoddard Lyman	<i>Salt Lake City, Utah</i>	223 D.
Cloyd North McAlister	<i>St. Joseph, Mo.</i>	90 N. M.
Thomas Lee McClung	<i>Knoxville, Tenn.</i>	143 F.
Henry Buehler McCormick	<i>Harrisburg, Pa.</i>	1079 Chapel st.
Frederic Edward McKay	<i>New York City</i>	199 York st.
William Maffitt	<i>St. Louis, Mo.</i>	1090 Chapel st.
Daniel Edgar Manson	<i>New Haven, Conn.</i>	189 Columbus av.
Arthur Merwin Marsh	<i>Bridgeport, Conn.</i>	76 N. M.
Elliott Marshall	<i>Montclair, N. J.</i>	76 N. M.
Levi Winfield Marshall	<i>Middleboro, Mass.</i>	295 York st.
Loren Pinckney Waldo Marvin	<i>Hartford, Conn.</i>	251 L.
Edward Hopkins Mason	<i>Chicago, Ill.</i>	126 High st.
William Messick, Jr.	<i>Memphis, Tenn.</i>	156 Grove st.
Abraham Meyer	<i>Chicago, Ill.</i>	264 L.

Ernest Boyd Millard	<i>Rochester, N. Y.</i>	364 George st.
Charles William Mills	<i>Denver, Col.</i>	39 Lynwood st.
George Redington Montgomery	<i>Adana, Turkey</i>	63 Grove st.
Francis Miner Moody	<i>New Haven, Conn.</i>	Fair Haven
James Albert Moore	<i>Norwich, N. Y.</i>	409 Temple st.
Stanford Newel Morison	<i>Minneapolis, Minn.</i>	170 York st.
Charles Dennis Morris	<i>Wallingford, Conn.</i>	35 High st.
Robert Wallace Morris	<i>Wallingford, Conn.</i>	35 High st.
Edward Buffett Mowbray	<i>Bay Shore, N. Y.</i>	192 York st.
Thornwell Mullally	<i>Pendleton, S. C.</i>	86 Whitney av.
David Raphael O'Donnell	<i>New Haven, Conn.</i>	30 Ward st.
Allen Cromwell Orrick	<i>St. Louis, Mo.</i>	1090 Chapel st.
Frank Burton Otis	<i>Meriden, Conn.</i>	Meriden
Robert Allan Paddock	<i>St. Louis, Mo.</i>	95 N. M.
Alfred Barnes Palmer	<i>Bridgeport, Conn.</i>	307 George st.
Lewis Rathbone Parker	<i>Albany, N. Y.</i>	68 N. M.
William Wilson Parker	<i>Washington, D. C.</i>	174 F.
Edward Walker Pease	<i>Cleveland, O.</i>	1157 Chapel st.
Clarence Guest Pell	<i>New York City</i>	203 York st.
John Inglee Phinney	<i>Machias, Me.</i>	99 N.
Charles Peabody Pierce	<i>Hardwick, Mass.</i>	110 N.
Horace Tracy Pitkin	<i>Philadelphia, Pa.</i>	192 York st.
Ralph Carr Powell	<i>Cincinnati, O.</i>	27 High st.
Frank Julian Price	<i>Brooklyn, N. Y.</i>	98 N.
Matthew Ambrose Reynolds	<i>New Haven, Conn.</i>	550 Whalley av.
George Waldo Howard Rice	<i>Springfield, Mass.</i>	98 N.
James Perkins Richardson	<i>Kansas City, Mo.</i>	407 Temple st.
Alphonse George de Riesthal	<i>Brooklyn, N. Y.</i>	928 Chapel st.
Isaac Woodbridge Riley	<i>New Haven, Conn.</i>	433 Temple st.
Thomas Joseph Roberts	<i>Scranton, Pa.</i>	67 N. M.
William Nelson Runyon	<i>Plainfield, N. J.</i>	125 N.
John Lewis Russell	<i>Great Barrington, Mass.</i>	143 York st.
Ernest Ryle	<i>Paterson, N. J.</i>	3 College st.
Edward Stevens Sanborn	<i>Kingston, N. H.</i>	99 N.
John Swartwood Schoonover	<i>New Haven, Conn.</i>	15 Wooster pl.
Otto Adolph Schreiber	<i>Hoboken, N. J.</i>	155 Elm st.
Charles Augustus Schumaker	<i>Parish, N. Y.</i>	318 Elm st.
Charles Brown Sears	<i>Brooklyn, N. Y.</i>	154 Grove st.
Frank Wright Seymour	<i>Winsted, Conn.</i>	63 Grove st.
Arthur Wynne Shaw	<i>Paterson, N. J.</i>	169 F.
Augustus Farnham Shaw	<i>Wellsboro, Pa.</i>	190 C.
Forrest Shepherd, 2d	<i>Hartford, Conn.</i>	142 F.
William Gay Skiddy	<i>Stamford, Conn.</i>	133 College st.
Emanuel Frank Snyder	<i>Chicago, Ill.</i>	264 L.
Elmer Haynes Spaulding	<i>New London, Conn.</i>	165 York st.

Alfred Lawrence Spencer	<i>New Haven, Conn.</i>	1144 Chapel st.
Edwin Obed Stanard, Jr.	<i>St. Louis, Mo.</i>	1090 Chapel st.
Walter Ralph Steiner	<i>Baltimore, Md.</i>	169 F.
Eben Foster Stevens	<i>Lawrence Station, N. Y.</i>	133 College st.
Herbert Anson Stocking	<i>Wallingford, Conn.</i>	1157 Chapel st.
Alfred Harris Swayne	<i>New York City</i>	223 D.
Martin John Synnett	<i>Montclair, N. J.</i>	37 S. M.
Harlan Henry Taintor	<i>Hartford, Conn.</i>	250 L.
Harrison John Teller	<i>Central City, Col.</i>	1079 Chapel st.
George Davis Terry	<i>Brooklyn, N. Y.</i>	212 D.
Alfred Clark Thompson	<i>Willimantic, Conn.</i>	109 N.
John Knox Tibbits	<i>Troy, N. Y.</i>	82 Wall st.
Howard Rockwell Townsend	<i>New York City</i>	254 Crown st.
Tom Cann Trask	<i>Scranton, Pa.</i>	78 N. M.
Frederick Deming Tucker	<i>Monson, Mass.</i>	126 N.
Rufus Edgar Turpin	<i>Louisville, Ky.</i>	266 York st.
Ralph Richard Upton	<i>Washington, D. C.</i>	112 N.
Warren Gookin Waterman	<i>Southport, Conn.</i>	84 Wall st.
Henry Goodwin Webster	<i>Brooklyn, N. Y.</i>	113 York st.
Stuart Webster	<i>Chicago, Ill.</i>	155 Elm st.
Albert Galusha Weeks	<i>New York City</i>	7 College st.
Irving Comstock West	<i>Plainfield, N. J.</i>	9 Library st.
James Everett Wheeler	<i>New Haven, Conn.</i>	486 Prospect st.
Albert Lavine Whittaker	<i>Wallingford, Conn.</i>	107 Ward st.
Norman Clark Whittemore	<i>Rye, N. Y.</i>	29 High st.
Walter Jones Willard	<i>Washington, D. C.</i>	109 Elm st.
Abram Case Williams	<i>East Hartford, Conn.</i>	96 N. M.
Clarence Cicero Wilson	<i>Avon, Conn.</i>	111 N.
Frank Tobey Winslow	<i>Watertown, N. Y.</i>	120 York st.
Charles Lawson Wooding	<i>Bristol, Conn.</i>	80 N. M.
Frederick Sanford Woodruff	<i>New York City</i>	266 L.
John Sitcher Woodruff	<i>New York City</i>	407 Orange st.
Harry Woollen	<i>Indianapolis, Ind.</i>	115 Elm st.
William Burnet Wright, Jr.	<i>New Britain, Conn.</i>	112 N.
Herbert James Wyckoff	<i>Woodbury, Conn.</i>	146 College st.
		FRESHMEN, 206

SUMMARY

SENIORS	.	.	.	.	.	127
JUNIORS	.	.	.	.	.	150
SOPHOMORES	.	.	.	.	.	205
FRESHMEN	.	.	.	.	.	206
						688

SHEFFIELD SCIENTIFIC SCHOOL

GRADUATE STUDENTS

Louis Lawrence Barnum, LL.B. } Yale University, 1886	<i>Thompsonville, Conn.</i>	16 s. H.
George Robert Carter, PH.B. } Yale University, 1888	<i>Honolulu, H. I.</i>	43 College st.
Oliver Ellsworth Cramer, B.A. } Augustana College, 1888	<i>Rock Island, Ill.</i>	20 Pearl st.
Charles Edward Curtis, PH.B. } Yale University, 1888.	<i>New Haven, Conn.</i>	138 Dwight st.
Orville Henry Drake, M.A. } Bates College, 1884	<i>Ashland, N. H.</i>	55 Prospect st.
Henry Hays Ellis, PH.B. } Yale University, 1888	<i>Oxford, Me.</i>	285 York st.
Oliver Cummings Farrington, M.S. } Maine State College, 1888	<i>Portland, Me.</i>	55 Prospect st.
John Ellis Field, PH.B. } Yale University, 1888	<i>Denver, Col.</i>	391 Temple st.
Matthew Griswold, Jr., PH.B. } Yale University, 1888	<i>Erie, Pa.</i>	38 High st.
Alfred Hand, Jr., B.A. } Yale University, 1888	<i>Scranton, Pa.</i>	128 High st.
Cyrus Field Judson, PH.B. } Yale University, 1888	<i>New York City</i>	
Felix Kleeberg, PH.B. } Yale University, 1888	<i>New Haven, Conn.</i>	14 Orange st.
Frank Dodge Leffingwell, B.A. } Yale University, 1887	<i>Montclair, N. J.</i>	55 Prospect st.
Charles Norris, Jr., PH.B. } Yale University, 1888	<i>New York City</i>	250 York st.
Selden Yale Osborn, PH.B. } Yale University, 1888	<i>New Haven, Conn.</i>	131 Grove st.
William Ezra Roop, B.A. } Western Maryland College, 1886	<i>Westminster, Md.</i>	125 Dwight st.
James Alward Seymour, PH.B. } Yale University, 1885	<i>Auburn, N. Y.</i>	A.
Ernest Ellsworth Smith, PH.B. } Yale University, 1888	<i>New Haven, Conn.</i>	1018 Chapel st.
Percy Franklin Smith, PH.B. } Yale University, 1888	<i>New Haven, Conn.</i>	13 Home pl.
Fred Palmer Solley, B.A. } Yale University, 1888	<i>Orange, N. J.</i>	116 W.
Erwin Starr Sperry, PH.B. } Yale University, 1887	<i>Ansonia, Conn.</i>	Ansonia
William Conquest Tucker, PH.B. } Yale University, 1888	<i>New York City</i>	61 W.
Morgan Walcott, PH.B. } Yale University, 1888	<i>New York City</i>	A.
Brownlee Robertson Ward, B.A. } Yale University, 1888	<i>New Haven, Conn.</i>	138 Temple st.

SENIOR CLASS

Arthur Chambers Alexander	<i>Honolulu, H. I.</i>	38 High st.
William Belknap Allen	<i>Pewee Valley, Ky.</i>	133 College st.
James Bradshaw Bailey	<i>Harrisburg, Pa.</i>	43 College st.
William Bartlett Beckley	<i>New Haven, Conn.</i>	300 Howard av.
William Dennison Breed	<i>Cincinnati, O.</i>	68 w.
William Fances Breeze	<i>San Francisco, Cal.</i>	114 High st.
George Tyler Burroughs, Jr.	<i>Chicago, Ill.</i>	248 York st.
Henry Studley Burroughs	<i>Chicago, Ill.</i>	248 York st.
Frank Arthur Busse	<i>New Haven, Conn.</i>	3 Ridge st.
Perry Moore Caldwell	<i>Wheeling, W. Va.</i>	36 Elm st.
Arthur Sanford Cheney	<i>New Haven, Conn.</i>	45 Elm st.
William Shinn Clawson	<i>Woodstown, N. J.</i>	131 Grove st.
William Hillard Conyngham	<i>Wilkes-Barre, Pa.</i>	43 College st.
Frank Marcus Cooper	<i>Kingston, Pa.</i>	35 High st.
Louis Julius Curtis	<i>Stamford, Conn.</i>	253 York st.
Arthur Herbert Day	<i>New Haven, Conn.</i>	Grove st.
Edward Hangary Day	<i>New Albany, Ind.</i>	297 George st.
Edwin Kirk Dillingham	<i>New Orleans, La.</i>	133 College st.
Louis Coert DuBois	<i>Hudson, N. Y.</i>	36 Elm st.
Frederick Howard Ellsworth	<i>Hartford, Conn.</i>	1 Whalley av.
Harootum Enfajian	<i>Harpoon, Turkey</i>	92 York sq.
Edward Everest	<i>Newark, N. J.</i>	90 Wall st.
William Irving Ferrey	<i>Pittsfield, Mass.</i>	35 High st.
Theron Rockwell Field	<i>New York City</i>	88 Wall st.
Lewis Brown Gawtry	<i>New York City</i>	43 College st.
George Frank Goodale	<i>New Haven, Conn.</i>	6 Prospect pl.
Louis Montrose Haight	<i>Alameda, Cal.</i>	90 Wall st.
Henry Pierce Hall	<i>San Francisco, Cal.</i>	131 Grove st.
John Augustus Hartwell	<i>Unionville, N. Y.</i>	128 Temple st.
Leland Howard	<i>Hartford, Conn.</i>	43 College st.
Arthur Grant Huntington	<i>Cleveland, O.</i>	132 Wall st.
Arthur Wiswell Jepson	<i>New Haven, Conn.</i>	30 Grove st.
John Henry Klock, Jr.	<i>New Haven, Conn.</i>	1201 Chapel st.
C. Carlton Lee	<i>Cleveland, O.</i>	132 Wall st.
Eugene Lentilhon	<i>New York City</i>	71 w.
George Alfred Lund	<i>West Stratford, Conn.</i>	297 York st.
David Lyman	<i>Middlefield, Conn.</i>	391 Temple st.
Boynton Wells McFarland	<i>New Haven, Conn.</i>	67 Mansfield st.
Frank Aloysius Maloney	<i>New Haven, Conn.</i>	34 Ferry st.
Kingsley Walton Martin	<i>Staten Island, N. Y.</i>	132 Wall st.
Ferris Jacobs Meigs	<i>New York City</i>	88 Wall st.
George Wellington Miles, Jr.	<i>Milford, Conn.</i>	Milford
John Raymond Mitchell	<i>Franklin, Pa.</i>	126 Wall st.

Augustus René Moën	<i>New York City</i>	43 College st.
Edwin Morrison	<i>Cincinnati, O.</i>	132 Wall st.
William Brewster Morrison	<i>Willimantic, Conn.</i>	128 Temple st.
William Belknap Newberry	<i>New Haven, Conn.</i>	73 Whitney av.
Roger Samuel Newell	<i>Bristol, Conn.</i>	88 Wall st.
Frank Lee Owen	<i>Oakland, Cal.</i>	46 Elm st.
Gaius Foster Paddock	<i>St. Louis, Mo.</i>	131 Grove st.
Kenyon Vickers Painter	<i>Cleveland, O.</i>	155 Elm st.
William Henry Pierce	<i>South Britain, Conn.</i>	22 Whalley av.
Edwin Read	<i>Brooklyn, N. Y.</i>	131 Grove st.
Irwin Rew	<i>Chicago, Ill.</i>	88 Wall st.
Henry Work Rianhard	<i>New York City</i>	43 College st.
Paul Skiff Robinson	<i>New Haven, Conn.</i>	137 Edwards st.
Alfred Schwab	<i>Chicago, Ill.</i>	72 w.
Paul Sheaffer	<i>Pottsville, Pa.</i>	105 Wall st.
Arthur Bertram Skelding	<i>Riverside, Conn.</i>	393 Temple st.
George Jarvis Spencer	<i>Old Saybrook, Conn.</i>	411 Temple st.
Charles Emerson Stone	<i>Spencer, Mass.</i>	128 High st.
Danford Newton Barney Sturgis	<i>New York City</i>	68 w.
Lewis Hobart Sweetser	<i>San Francisco, Cal.</i>	248 York st.
Henry Hutchins Sykes	<i>New Haven, Conn.</i>	137 Wall st.
Oren Edward Taft	<i>Chicago, Ill.</i>	152 Grove st.
Abraham Louis Thalheimer	<i>New Haven, Conn.</i>	100 St. John st.
Charles Newman Traver	<i>Hudson, N. Y.</i>	248 York st.
Clarence Beecher Twitchell	<i>New Haven, Conn.</i>	68 Asylum st.
Harry Mighels Verrill	<i>Portland, Me.</i>	90 Wall st.
Robert Taylor Wheeler	<i>Jersey City, N. J.</i>	88 Wall st.
Guthrie Minor Wilson	<i>Bardstoun, Ky.</i>	297 George st.
Julian Vallette Wright	<i>Cincinnati, O.</i>	131 Grove st.
William Charles Wurtenberg	<i>Willink, N. Y.</i>	88 Wall st.

SENIORS, 74

JUNIOR CLASS

Philip Allen	<i>Providence, R. I.</i>	133 College st.
John Alling, Jr.	<i>Chicago, Ill.</i>	132 Wall st.
Cyrus Morgan Arnold	<i>New York City</i>	134 College st.
George Perkins Bissell, Jr.	<i>Wilmington, Del.</i>	146 College st.
Theodore Whitney Blake	<i>Whitneyville, Conn.</i>	29 Wall st.
George Henry Blakeslee	<i>Schenectady, N. Y.</i>	107 Wall st.
Wendell Phillips Brown	<i>Plainfield, Conn.</i>	59 Grove st.
Horace Ray Burritt	<i>New Haven, Conn.</i>	54 Edwards st.
William Harper Butler	<i>Olean, N. Y.</i>	248 York st.
Frederic Carter	<i>Waterbury, Conn.</i>	36 Elm st.
Robert Lockwood Casement	<i>Painesville, O.</i>	1010 Chapel st.
Horace Bushnell Cheney	<i>South Manchester, Conn.</i>	90 High st.
John Platt Cheney	<i>South Manchester, Conn.</i>	131 Grove st.
Ralph Roger Clapp	<i>Pawtucket, R. I.</i>	395 Temple st.
Clarence Beverly Davison	<i>New York City</i>	43 College st.
Harry Goodyear Day	<i>Seymour, Conn.</i>	1010 Chapel st.
Nelson Lloyd Deming	<i>Danbury, Conn.</i>	88 Wall st.
Walter Dodge	<i>Stamford, Conn.</i>	55 Trumbull st.
Robert Metcalf Dodsworth	<i>Los Angeles, Cal.</i>	55 Trumbull st.
Harrison Irwin Drummond	<i>St. Louis, Mo.</i>	131 Grove st.
Julian DuBois	<i>Hudson, N. Y.</i>	38 Elm st.
Alexander William Evans	<i>New Haven, Conn.</i>	12 High st.
Willis Judson Fenn	<i>Plymouth, Conn.</i>	395 Temple st.
Freeland Barney Gardner	<i>Chicago, Ill.</i>	132 Wall st.
Ralph Schuyler Goodwin, Jr.	<i>Thomaston, Conn.</i>	395 Temple st.
Neil Gray, Jr.	<i>Oswego, N. Y.</i>	1010 Chapel st.
Everett Gallup Griggs	<i>St. Paul, Minn.</i>	131 Grove st.
Lewis Winters Gunkel	<i>Dayton, O.</i>	36 Elm st.
Charles Newton Gunn	<i>New Haven, Conn.</i>	255 York st.
Joseph Barnard Hall	<i>Hartford, Conn.</i>	36 Elm st.
Lawrence Heyworth	<i>Chicago, Ill.</i>	43 College st.
Harry Dutton Holbrook	<i>Utica, N. Y.</i>	107 Wall st.
Theodore Dudley Irwin	<i>Albany, N. Y.</i>	88 Wall st.
Adrian Muller Isham	<i>New York City</i>	1010 Chapel st.
Walter Tracy Ives	<i>Montreal, Canada</i>	391 Temple st.
William Francis Judson	<i>New York City</i>	43 College st.
Elbridge Byron Keith	<i>Chicago, Ill.</i>	132 Wall st.
William Matthew Kenna	<i>New Haven, Conn.</i>	Selden House
Charles Louis Kirschner	<i>New Haven, Conn.</i>	94 Prospect st.
Harvey Merrill Lawson	<i>Union, Conn.</i>	134 College st.
Franklin Lyman Lawton	<i>Meriden, Conn.</i>	Meriden
Oliver Smith Lyford, Jr.	<i>Chicago, Ill.</i>	88 Wall st.
Herbert McBride	<i>Cleveland, O.</i>	43 College st.

Frank Dunlevy McCaulley	<i>New York City</i>	131 Grove st.
John Carter Machale	<i>Sawyer City, Pa.</i>	297 York st.
Henry Porter McKnight	<i>Louisville, Ky.</i>	107 Wall st.
Campbell Emory McMichael	<i>Philadelphia, Pa.</i>	43 College st.
Frederick James Mann	<i>Utica, N. Y.</i>	126 High st.
William Crosby Marshall	<i>Cromwell, Conn.</i>	65 Grove st.
James Moorhead Murdoch	<i>Pittsburgh, Pa.</i>	131 Grove st.
John Stevens Murdock	<i>Westbrook, Conn.</i>	7 Library st.
Paul Nash	<i>Westport, Conn.</i>	59 Grove st.
Edgar Burr Northrup	<i>Broadalbin, N. Y.</i>	248 York st.
Alfred Walling Ogden	<i>Keyport, N. J.</i>	286 Norton st.
Charles Augustus Otis, Jr.	<i>Cleveland, O.</i>	1010 Chapel st.
Robert Ellsworth Peck	<i>New Haven, Conn.</i>	486 Elm st.
John Frederick Pennell	<i>New Haven, Conn.</i>	109 High st.
John Conover Powell	<i>Dayton, O.</i>	248 York st.
Frank Russell Rich	<i>New Haven, Conn.</i>	369 Shelton av.
Charles Talbot Richmond	<i>Providence, R. I.</i>	133 College st.
Walter Brooks Robinson	<i>Chicago, Ill.</i>	1010 Chapel st.
William Sterling Roby	<i>Rochester, N. Y.</i>	1010 Chapel st.
Charles Francis Rogers	<i>New Canaan, Conn.</i>	43 College st.
Edwin Rowe, Jr.	<i>New Haven, Conn.</i>	411 Orange st.
James Woodrow Ruthven	<i>Scranton, Pa.</i>	36 Elm st.
Ernest Elisha Severy	<i>Waterbury, Conn.</i>	393 Temple st.
Chester Burdell Shepard	<i>Middletown, Conn.</i>	65 w.
William Alexander Simms	<i>Dayton, O.</i>	248 York st.
Walter Tuttle Spencer	<i>Guilford, Conn.</i>	65 w.
Charles Bailey Spruce	<i>Waterbury, Conn.</i>	86 w.
Frederic Clark Strong	<i>Winsted, Conn.</i>	86 w.
John Clayton Tracy	<i>Fair Haven, Conn.</i>	299 Center st., F. H.
Albert Milford Turner	<i>Northfield, Conn.</i>	265 Orange st.
John McKee Verhoeff	<i>Louisville, Ky.</i>	393 Temple st.
Edward Young Ware	<i>St. Louis, Mo.</i>	7 Library st.
William Walker Wear	<i>Chicago, Ill.</i>	310 Elm st.
Charles Spencer Wells	<i>Southport, Conn.</i>	86 Whitney av.
Henry Lord Wheeler	<i>Chicago, Ill.</i>	132 Wall st.
Frederick Wareham Williams	<i>Norwich, Conn.</i>	131 Grove st.
George Cushing Worthington	<i>Cleveland, O.</i>	36 Elm st.

JUNIORS, 80

FRESHMAN CLASS

William Adams, Jr.	Scarsdale, N. Y.	389 Temple st.
Frederick Max Adler	New Haven, Conn.	127 Greene st.
Colgate Baker, Jr.	Kiogo, Japan	7 Library st.
Harris Walton Baker	Springfield, Mass.	1136 Chapel st.
Alfred Victor Barnes	Brooklyn, N. Y.	29 High st.
Arthur George Beach	Bristol, Conn.	192 York st.
Harry Cockill Beury	Shamokin, Pa.	46 Elm st.
Willis James Black	Bridgeport, Conn.	213 Crown st.
Burton Dickinson Blair	Collinsville, Conn.	389 Temple st.
Arthur Eli Booth	Peace Dale, R. I.	111 Dwight st.
William Henry Bronson	New York City	109 High st.
Harry Kilburn Brown	Denver, Col.	242 York st.
Joseph Douglas Brown	New York City	44 Elm st.
Wendell Greene Brownson	New Canaan, Conn.	318 Orange st.
Sterling Haight Bunnell	Stratford, Conn.	213 Crown st.
Browne Caldwell	Pittsburgh, Pa.	90 Wall st.
Robert Calhoun	Chicago, Ill.	114 High st.
DeLancey Allen Cameron	Brooklyn, N. Y.	389 Temple st.
Nehemiah Candee	Easton, Conn.	386 Crown st.
Robert Hanna Carnahan	Fort Wayne, Ind.	46 Elm st.
Henry Albert Carpenter	Willimantic, Conn.	31 1/2 Broadway
Francis Allen Clark	Plantsville, Conn.	70 Howe st.
Noyes Dwight Clark	Woodbridge, Conn.	642 Elm st.
Robert Lewis Coleman	San Francisco, Cal.	38 Elm st.
Lehman Adams Cooper	Hagerstown, Md.	133 College st.
Homer Stille Cummings	New Haven, Conn.	174 Whitney av.
Laurence Andrew Dodsworth	New York City	44 Elm st.
Frederick James Easterbrook	New Haven, Conn.	82 York sq.
George Sherwood Eddy	Leavenworth, Kan.	133 College st.
Robert France Elmer	New York City	55 Trumbull st.
Wyatt Collier Estes	Memphis, Tenn.	106 Wall st.
George Chandler Forrest	Hartford, Conn.	133 College st.
Albert Francke	New York City	347 York st.
Eugene Duncan Funk	Shirley, Ill.	289 York st.
Frank Hamilton Funk	Bloomington, Ill.	289 York st.
Edward Everett Gates	Indianapolis, Ind.	53 Prospect st.
Simon Phillip Goodhart	New Haven, Conn.	189 Wooster st.
Willis Blake Goodwin	Bangor, Me.	128 Wall st.
Henry Whitmore Gregory	Darien, Conn.	144 Olive st.
William Pierson Hamilton	New York City	130 Wall st.
Pearl Tenney Haskell	West Falmouth, Me.	285 York st.
Frank Edwin Hawkes	Oxford, Me.	285 York st.
David Alexander Hays	Johnstown, N. Y.	389 Temple st.

Walter William Heffelfinger	<i>Minneapolis, Minn.</i>	425 Temple st.
Edwin Guy Helm	<i>Peru, Ind.</i>	133 College st.
John Williamson Herron, Jr.	<i>Cincinnati, O.</i>	107 Wall st.
James Tracy Hill	<i>Chicago, Ill.</i>	133 College st.
Robert Gibson Hilton	<i>Newburgh, N. Y.</i>	238 York st.
Robert Massonneau Hoffman	<i>Red Hook, N. Y.</i>	389 Temple st.
Thomas Osborn Horton	<i>Peconic, N. Y.</i>	409 Temple st.
Robert Schuttler Hotz	<i>Chicago, Ill.</i>	389 Temple st.
David Lynde Huntington	<i>San Diego, Cal.</i>	219 York st.
Milton Cleaveland Isbell	<i>Ansonia, Conn.</i>	Ansonia
Theodore Caldwell Janeway	<i>New York City</i>	65 Grove st.
Frederick William Jones, Jr.	<i>New York City</i>	126 Wall st.
Walter Woodruff Keith	<i>Chicago, Ill.</i>	70 Grove st.
James Hugh Kimball	<i>Chicago, Ill.</i>	31 Trumbull st.
George Coburn Kohler	<i>Akron, O.</i>	1179 Chapel st.
Augustus Frederick Kountze	<i>Omaha, Nebr.</i>	130 Wall st.
George Tallman Ladd	<i>New Haven, Conn.</i>	324 York st.
George Marcellus Landers, Jr.	<i>New Britain, Conn.</i>	137 Wall st.
Walter William Law, Jr.	<i>Yonkers, N. Y.</i>	395 Temple st.
Clifford Walter Leavenworth	<i>Wallingford, Conn.</i>	35 High st.
Daniel Alden Loring, Jr.	<i>Detroit, Mich.</i>	133 College st.
Charles Nassau Lowrie	<i>Warriors Mark, Pa.</i>	395 Temple st.
George Eldredge McClellan	<i>Woodstock, Conn.</i>	59 Grove st.
Alan Ramsay McFarland	<i>New Haven, Conn.</i>	67 Mansfield st.
Harold Chauncey Mathews	<i>New York City</i>	391 Temple st.
David Magie Meeker	<i>Newark, N. J.</i>	1142 Chapel st.
George Wylie Mercer	<i>Omaha, Nebr.</i>	391 Temple st.
Harral Mulliken	<i>Washington, D. C.</i>	310 Elm st.
Gustave Munzesheimer	<i>New York City</i>	223 York st.
Warren Bynner Nash	<i>Brooklyn, N. Y.</i>	114 High st.
John Colwell Neale	<i>Kittanning, Pa.</i>	629 Chapel st.
Nathaniel Read Norton	<i>Brooklyn, N. Y.</i>	318 Orange st.
Gustave Osterweis	<i>New Haven, Conn.</i>	301 Crown st.
James Allen Paramore	<i>St. Louis, Mo.</i>	New Haven House
Stanley Hawken Pearce	<i>Denver, Col.</i>	109 Wall st.
Arthur Chapin Pease	<i>Ellington, Conn.</i>	285 York st.
William Horace Pelton	<i>Hartford, Conn.</i>	130 Wall st.
George Henry Pinney	<i>South Manchester, Conn.</i>	226 Crown st.
Edwin Tewksbury Porter	<i>Eau Claire, Wisc.</i>	53 Prospect st.
George Nathaniel Prentiss	<i>Watertown, Wisc.</i>	242 York st.
Alfred Helm Preston	<i>Omaha, Nebr.</i>	391 Temple st.
Walter Grey Preston	<i>Omaha, Nebr.</i>	391 Temple st.
Leavitt Sprague Rand	<i>Minneapolis, Minn.</i>	25 Wall st.
Gardner Read	<i>Brooklyn, N. Y.</i>	425 Temple st.
Harold Anthony Richmond	<i>Providence, R. I.</i>	137 Wall st.

Fletcher Ritzinger	<i>Indianapolis, Ind.</i>	53 Prospect st.
Charles Marcy Robinson	<i>Middletown, Conn.</i>	99 Wall st.
Charles Farnam Rockwell	<i>New York City</i>	71 W.
Eugene Boutelle Sanger	<i>Bangor, Me.</i>	238 York st.
Charles H. Saunders	<i>Hartford, Conn.</i>	137 College st.
Ennis Newton Searles	<i>New Haven, Conn.</i>	279 Sherman av.
John David Shattuck	<i>Norwich, N. Y.</i>	409 Temple st.
Frederick Crippen Sheldon	<i>Chicago, Ill.</i>	A.
Harry Hudson Shepard	<i>New Haven, Conn.</i>	409 Orange st.
George Monroe Sidenberg	<i>New York City</i>	421 Temple st.
Edward Carlton Sisson	<i>Binghamton, N. Y.</i>	146 College st.
George Milton Smith	<i>Southington, Conn.</i>	70 Howe st.
Thomas Cullen Bryant Snell	<i>New Haven, Conn.</i>	105 Wooster st.
Lewis Edwards Sparrow	<i>Colchester, Conn.</i>	92 York sq.
George Pratt Starkweather	<i>New Haven, Conn.</i>	N. H. Hospital
Arthur Stein	<i>Chicago, Ill.</i>	311 York st.
George Fetter Stickney	<i>Louisville, Ky.</i>	393 Temple st.
Charles Ferris Sturtevant	<i>Cleveland, O.</i>	107 Wall st.
Edward Owen Sutton	<i>Springfield, Mass.</i>	83 Grove st.
Issa Tanimura	<i>Tokyo, Japan</i>	39 Lynwood st.
Amasa Trowbridge	<i>New Haven, Conn.</i>	685 Orange st.
Edward Van Ingen	<i>Brooklyn, N. Y.</i>	425 Temple st.
Clark Greenwood Voorhees	<i>New York City</i>	104 Wall st.
Arvine Wales	<i>Massillon, O.</i>	1179 Chapel st.
William Ernest Walker	<i>Chicago, Ill.</i>	114 High st.
Robert Karl Wehner, Jr.	<i>New Haven, Conn.</i>	1210 Chapel st.
Carl Frances Westerfeld	<i>San Francisco, Cal.</i>	150 College st.
Rudolph Michael Weyerhaeuser	<i>Rock Island, Ill.</i>	407 Orange st.
Noah Ashley Whitney	<i>Toledo, O.</i>	36 Wall st.
Henry Wick, Jr.	<i>Cleveland, O.</i>	407 Orange st.
Aras James Williams	<i>Utica, N. Y.</i>	393 Temple st.
Charles Morgan Wood	<i>Dayton, O.</i>	389 Temple st.
George Waters Wood	<i>Pittsburgh, Pa.</i>	7 Library st.
Pierre Jay Wurts	<i>New Haven, Conn.</i>	65 Whitney av.

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SPECIAL STUDENTS NOT CANDIDATES FOR A DEGREE

Philip Danforth Armour, Jr.	<i>Chicago, Ill.</i>	131 Grove st.
Tecumseh Sherman Clark	<i>Pittsburgh, Pa.</i>	131 Grove st.
Philip James Deering	<i>Portland, Me.</i>	928 Chapel st.
Louis Stanley Ferry	<i>New Haven, Conn.</i>	261 Crown st.
George Dexter Gregory	<i>Brooklyn, N. Y.</i>	88 Wall st.
Alfred Stillé Ives	<i>New Haven, Conn.</i>	347 Temple st.
John Kenneth Mackenzie	<i>London, England</i>	1142 Chapel st.
William Strong Post	<i>Hartford, Conn.</i>	1010 Chapel st.

SPECIAL STUDENTS, 8

SUMMARY

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SCHOOL OF THE FINE ARTS

Genevieve Allis	<i>Birmingham, Conn.</i>
Bertha P. Attwood	<i>East Haddam, Conn.</i>
M. Ona Banks	<i>New Haven, Conn.</i>
Constance H. Blake	<i>New Haven, Conn.</i>
Margaret E. Blue	<i>Shelton, Conn.</i>
Elizabeth K. Bradley	<i>New Haven, Conn.</i>
Robert F. Brainerd	<i>Westchester, Conn.</i>
Susan J. Candee	<i>New Haven, Conn.</i>
Mary F. Carew	<i>New Haven, Conn.</i>
Elizabeth C. Cooper	<i>New Haven, Conn.</i>
Grace Daggett	<i>New Haven, Conn.</i>
John I. H. Downes	<i>New Haven, Conn.</i>
Caroline R. Durgy	<i>New Haven, Conn.</i>
Helen Rood Dwight	<i>New Haven, Conn.</i>
Winthrop Edwards Dwight	<i>New Haven, Conn.</i>
Mary W. Evans	<i>New Haven, Conn.</i>
Anne May Farnam	<i>New Haven, Conn.</i>
Elizabeth T. Fitch	<i>New Haven, Conn.</i>
Elizabeth Griswold	<i>New Haven, Conn.</i>
Irving E. Hurlbut	<i>New Haven, Conn.</i>
Mary Lamport	<i>New Haven, Conn.</i>
Christophia Leffingwell	<i>New Haven, Conn.</i>
Josephine M. Lewis	<i>New Haven, Conn.</i>
Eleanor D. Munger	<i>New Haven, Conn.</i>
Elizabeth S. Newberry	<i>New Haven, Conn.</i>
Etta A. Osborne	<i>Walkingford, Conn.</i>
Elizabeth S. Pitman	<i>New Haven, Conn.</i>
Martha J. Potter	<i>New Haven, Conn.</i>
Laura G. Preston	<i>Springfield, Ill.</i>
Harriet R. Richards	<i>New Haven, Conn.</i>
Thomas Robinson	<i>Wallingford, Conn.</i>
Elnora D. Rogers	<i>New Haven, Conn.</i>
Elsie Rowland	<i>Waterbury, Conn.</i>
Cora L. Schickle	<i>Poughkeepsie, N. Y.</i>
Clara E. Smith	<i>Northford, Conn.</i>
Mary E. Sperry	<i>New Haven, Conn.</i>
Laura Stoughton	<i>New Haven, Conn.</i>
Maria B. Street	<i>Milford, Conn.</i>

G. Albert Thompson	<i>Fair Haven, Conn.</i>
Mary E. Thompson	<i>Poughkeepsie, N. Y.</i>
Mary B. Wells	<i>Wethersfield, Conn.</i>
Susan S. White	<i>New Haven, Conn.</i>
Vouletti Whitlock	<i>Shelton, Conn.</i>
Orrit C. Whitman	<i>Chicago, Ill.</i>
Annie H. Williston	<i>New Haven, Conn.</i>
Fannie L. Wiseman	<i>New Haven, Conn.</i>
Herbert Witherspoon	<i>New Haven, Conn.</i>

Art Students,	47
Special Undergraduate Students in Drawing, . . .	121
Total number of students receiving instruction, . .	168

DEPARTMENT OF THEOLOGY

(YALE DIVINITY SCHOOL)

RESIDENT LICENTIATES,

ATTENDING LECTURES

Thomas Bickford, B.A.	}	<i>New Haven, Conn.</i>	22 Clinton av.
Madison University, 1875			
John Andrew Stemen, B.D.	}	<i>Bremen, O.</i>	76 W.
Yale University 1885,			
B.A. Ohio West. University, 1880			

RESIDENT LICENTIATES, 2

GRADUATE CLASS,

PURSUING FOURTH YEAR STUDIES

Mark Wilson Chunn, B.D.	}	<i>Mechanicsville, Md.</i>	34 E.
Yale University 1886,			
B.A. Western Md. College, 1882			
Charles Allen Dinsmore, B.D.	}	<i>Stowe, Vt.</i>	Whitneyville
Yale University 1888,			
Kentucky University			
Franklin LaDu Ferguson, B.D.	}	<i>Chicago, Ill.</i>	Milford
Yale University 1888,			
Victoria University			
John Edward Herman, B.D.	}	<i>Warsaw, N. Y.</i>	19 E.
Yale University 1888,			
Union Biblical Institute			
D. Melancthon James, B.D.	}	<i>New Haven, Conn.</i>	249 Quinpiac st.
Yale University 1888,			
B.A. Randolph-Macon College, 1881			
Lewis Franklin John, B.D.	}	<i>Dayton, O.</i>	21 E.
Yale University 1888,			
B.A. Otterbein University, 1883			
Alexander Milne, B.D.	}	<i>Westerly, R. I.</i>	42 E.
Yale University 1888			
Rikizo Nakashima, B.D.	}	<i>Kiyoto, Japan</i>	104 W.
Yale University 1887,			
B.A. Western Reserve University, 1884			
Frank Chamberlin Porter, B.D.	}	<i>Beloit, Wisc.</i>	99 W.
Yale University 1886,			
M.A. Beloit College, 1883			

James Bronson Reynolds, B.D. } Yale University 1888, B.A. Yale University, 1884	North Haven, Conn.	83 E.
Lucius Harrison Thayer, B.D. } Yale University 1888, B.A. Amherst College, 1882 (On the Graduate Fellowship)	Westfield, Mass.	III W.

GRADUATE CLASS, II

SENIOR CLASS

Theodore Davenport Bacon, } Sheffield Scientific School	New Haven, Conn.	103 W.
Eli Beers, B.A. } Yale University, 1886	Bridgewater, Conn.	32 E.
Frederick Widmer Burrows, B.A. } Oberlin College, 1886	Wyoming, O.	84 W.
Clay Dent Chunn	Chaptico, Md.	23 E.
Charles Franklin Clarke, B.A. } Yale University, 1886	Columbia, Conn.	29 E.
Harlan Creelman, } University of New Brunswick	York, Me.	44 E.
William Luke Cunningham, } Illinois Wesleyan University	Hamilton Square, N. Y.	37 Beers st.
Olaus Dahl, B.A. } Luther College, 1885	Lochiel, Wisc.	80 W.
George Pomeroy Eastman, B.A. } Amherst College, 1884	Framingham, Mass.	98 W.
William Griffiths, } Carmarthen College, 1886	Cwmilynfell, South Wales	17 E.
Albert Wellman Hitchcock, M.A. } Amherst College, 1882	Kalamazoo, Mich.	108 W.
Robert Murray Hogue, B.A. } University of Pennsylvania, 1886	Philadelphia, Pa.	93 W.
George Henry Jackson, } Hamilton Theol. Sem. 1887	New Haven, Conn.	75 Winthrop av.
Lewis Henry Keller, } Adrian College	Upper Sandusky, O.	20 E.
William Henry Klose, B.A. } Roanoke College, 1886	Mifflinburg, Pa.	25 E.
Luther Kendall Long, PH.B. } Adrian College, 1883	Strong City, Kan.	49 Ivy st.
Winfield Scott Manship, B.A. } Wesleyan University, 1886	Honeybrook, Pa.	40 E.
Joseph Fairbanks Morse, B.A. } Amherst College, 1884	St. Johnsbury, Vt.	94 W.
John Frederic Nicholas, B.A. } Muhlenberg College, 1886	Santee, Pa.	117 W.

Manly Dayton Ormes, B.A. } Yale University, 1885	<i>Tuscola, Mich.</i>	88 W.
Manasseh Garabed Papazian, B.A. } Central Turkey College, 1882	<i>Aintab, Turkey</i>	87 W.
Wallace Claire Payne, B.A. } Bethany College, 1886	<i>South Bend, Ind.</i>	48 E.
Chas. Benjamin Franklin Pease, B.A. } Williams College, 1886	<i>Buskirks, N. Y.</i>	82 W.
George Petry, B.A. } University of Pennsylvania, 1886	<i>Philadelphia, Pa.</i>	89 W.
Arthur Stevens Phelps, B.A. } Yale University, 1886	<i>New Haven, Conn.</i>	44 High st.
James Gibson Robertson, B.A. } Williams College, 1886	<i>Salem, N. Y.</i>	95 W.
Frank Robinson Shipman, B.A. } Yale University, 1885	<i>Hartford, Conn.</i>	97 W.
Henry Stauffer, } Otterbein University	<i>Denver, Col.</i>	27 E.
Glen Albert Taylor, B.A. } Williams College, 1885	<i>Denmark, Iowa</i>	114 W.
James Hayden Tufts, B.A. } Amherst College, 1884	<i>Monson, Mass.</i>	96 W.
Henry William Tuttle, B.A. } Williams College, 1886	<i>Otisco, N. Y.</i>	14 E.
Howard Ridgway Vaughn, B.A. } Wesleyan University, 1886	<i>New Egypt, N. Y.</i>	45 E.
Dean Augustus Walker, B.A. } Yale University, 1884	<i>Auburndale, Mass.</i>	78 W.
William Wiedenhœft, B.A. } Oberlin College, 1886	<i>Belden, Ind.</i>	112 W.
Charles Newton Zeublin, PH.B. } Northwestern University, 1887	<i>Evanston, Ill.</i>	67 W.

SENIOR CLASS, 35

MIDDLE CLASS

Lucius Olmsted Baird, B.A. } Yale University, 1885	<i>Chicago, Ill.</i>	109 W.
Frank Clyde Baker, B.A. } Oberlin College, 1886	<i>Bay City, Mich.</i>	120 W.
Gerald Hamilton Beard, B.A. } Yale University, 1887	<i>Chicago, Ill.</i>	28 E.
Edwin Victor Bigelow, B.A. } University of Washington, 1887	<i>Seattle, Wash. Terr.</i>	26 E.
Jesse Levi Bright, } Oberlin College	<i>Columbus, O.</i>	22 E.
Daniel Emery Burtner, B.A. } Lebanon Valley College, 1886	<i>West Fairview, Pa.</i>	39 E.

Ernest LeRoy Caldwell, B.A. } Yale University, 1887	Windsor, Conn.	35 E.
Demas Cochlin, B.A. } Ohio Wesleyan University, 1886	Sidney, O.	2 E.
Charles Dow Crawford, B.A. } Drury College, 1887	Springfield, Mo.	33 E.
Arthur Hill Daniels, B.A. } Olivet College, 1887	Millis, Mass.	31 E.
William Davies, } Haverfordwest Bapt. College	Sarn, Wales	18 E.
Josiah Pope Dickerman, B.A. } Amherst College, 1886	Foxborough, Mass.	90 W.
Arthur Fairbanks, B.A. } Dartmouth College, 1886	St. Johnsbury, Vt.	102 W.
Edward Torrey Ford, } Amherst College	Brockton, Mass.	30 E.
David Elmer Ghormley, B.A. } Wooster University, 1887	Partridge, Kan.	192 Grove st.
Joseph Wallace Gunn, B.A. } Carleton College, 1886	Northfield, Minn.	10 E.
Lincoln Archer Holp, } Otterbein University	Columbus, O.	47 E.
Edward Payson Holton, B.A. } Amherst College, 1887	Everett, Mass.	113 W.
George Ellsworth Hooker, B.A. } Amherst College, 1883	Barre, Vt.	52 E.
Herbert Bacon Hutchins, B.A. } Harvard University, 1886	Brooklyn, N. Y.	105 W.
Corliss Wilkes Lay, B.A. } Knox College, 1887	Kewanee, Ill.	49 E.
Robert Charles Martin, B.A. } Oberlin College, 1887	Washington, D. C.	51 E.
Julius Adolph Meckel, } Oberlin College	Cleveland, O.	79 W.
James Wilber Moulton, B.A. } Bates College, 1887	Guilford, Conn.	46 E.
John Thomas Nichols, B.A. } Harvard University, 1884	Freetown, Mass.	54 E.
Stephen Beasley Linnard Penrose, B.A. } Williams College, 1885	Germantown, Pa.	75 W.
John Harrison Reid, } Lafayette College	West Hebron, N. Y.	114 Olive st.
Edward Tallmadge Root, B.A. } Yale University, 1887	Springfield, O.	41 E.
Theophilus Huntington Root, B.A. } Harvard University, 1885	Framingham, Mass.	41 E.
Claudius Milton Severance, M.A. } Middlebury College, 1883	Bennington Center, Vt.	118 W.
Harry Dodd Sheldon, B.A. } Oberlin College, 1886	Hillsdale, Mich.	428 Orange st.

Elmer Ellsworth Smiley, B.A. } Syracuse University, 1885	<i>North Syracuse, N. Y.</i>	81 W.
Edward Lincoln Smith, B.A. } Yale University, 1886	<i>Montpelier, Vt.</i>	8 E.
Joseph Jansen Spencer, B.A. } Otterbein University, 1884	<i>Westerville, O.</i>	73 W.
Dwight Ansel Strong, B.A. } Olivet College, 1887	<i>Huntsburg, O.</i>	31 E.
William Austin Trow, B.A. } Amherst College, 1886	<i>Northampton, Mass.</i>	43 E.
Eugene Carroll Webster, B.A. } Harvard University, 1887	<i>Malden, Mass.</i>	123 W.
Morrison Weimer, B.A. } Lebanon Valley College, 1887	<i>Donegal, Pa.</i>	37 E.
Schuyler Sampson White, B.A. } Harvard University, 1884	<i>Bridgewater, Mass.</i>	12 E.
John Sheridan Zelig, B.A. } Williams College, 1887	<i>Bangor, Me.</i>	92 W.

MIDDLE CLASS, 40

JUNIOR CLASS

Joseph Marvin Adams, B.A. } DePauw University, 1886	<i>Paris, Ill.</i>	58 W.
Edward Ernest Bradley, B.A. } Williams College, 1885	<i>Stockbridge, Mass.</i>	6 E.
George Atwood Brock, B.A. } Harvard University, 1888	<i>Boston, Mass.</i>	24 E.
Albert Shepard Bromer, B.S. } Ursinus College, 1888	<i>Schwenksville, Pa.</i>	85 W.
Samuel Cony Brooks, B.A. } Amherst College, 1888	<i>Augusta, Me.</i>	106 W.
Harvey Safford Bush, B.A. } University of Michigan, 1888	<i>Port Huron, Mich.</i>	122 W.
Timothy Currier Craig, B.A. } Harvard University, 1887	<i>Island Falls, Me.</i>	36 E.
James Romeyn Danforth, Jr., B.A. } Amherst College, 1888	<i>Philadelphia, Pa.</i>	4 E.
Arthur Ernest Davies, } Lancashire College	<i>London, England</i>	55 W.
Elmer Addison Dent, PH.B. } University of Ohio, 1888	<i>Athens, O.</i>	56 W.
Calvin Ursinus Olevianus Derr, B.A. } Ursinus College, 1888	<i>Reading, Pa.</i>	85 W.
Elmer Kendal Eyerly, B.A. } Franklin and Marshall Coll. 1888	<i>Hagerstown, Md.</i>	56 W.
Edward Colton Fellowes, B.A. } Yale University, 1888	<i>Hartford, Conn.</i>	66 W.

Mosheim Ross Walter Fishburn, B.A. } Pennsylvania College, 1887	Millersburg, Pa.	58 W.
Jonathan Lewis Fluck, B.A. } Ursinus College, 1888	Richland Center, Pa.	53 E.
Thomas Arthur Frey, B.A. } Roanoke College, 1888	Lovettsville, Va.	58 E.
Edward Augustus George, M.A. } Yale University, 1888	Providence, R. I.	13 E.
William Clark Gordon, B.A. } Yale University, 1888	Wales, Mass.	107 W.
Harvey Bartlett Greene, } Colorado College	Lowell, Mass.	50 E.
William Bates Greenough, B.A. } Amherst College, 1888	Westfield, Mass.	115 W.
Dorr Albert Hudson, B.A. } Yale University, 1888	Wakefield, Mass.	77 W.
Joseph Hutcheson, B.A. } Amherst College, 1885	Columbus, O.	119 W.
George Merriam Hyde, B.A. } Amherst College, 1888	Chicago, Ill.	15 E.
David Lyman Kebbe, B.A. } Amherst College, 1888	Holliston, Mass.	91 W.
Allen Alonzo Keene, B.A. } Amherst College, 1887	Atkinson, Me.	100 W.
William Albert Korn, B.A. } Ursinus College, 1887	Mertstown, Pa.	53 E.
Edward Lester Marsh, B.A. } Amherst College, 1888	Leicester, Mass.	115 W.
Frederick Howard Means, B.A. } Harvard University, 1888	Dorchester, Mass.	38 E.
Frederick Warren Oakes, B.A. } Bates College, 1888	Lawrence, Mass.	46 E.
Frederick Bliss Otis, B.L. } Olivet College, 1888	Olivet, Mich.	26 E.
Harry Ernest Peabody, B.A. } Harvard University, 1887	Princeton, Me.	36 E.
Edgar Allen Potts, M.A. } Randolph-Macon College, 1882	Lynchburg, Va.	107 W.
Fred Martin Rice, M.A. } Williams College, 1883	Natick, Mass.	110 W.
George Brinckerhoff Richards, PH.B. } Yale University, 1888	New Haven, Conn.	313 York st.
George Samuel Richards, } Brecon Memorial College, 1880	Mahanoy City, Pa.	55 W.
Alexander White Richardson, B.A. } McGill University, 1883	Montreal, Canada	57 W.
Jefferson Davis Ritchey, B.A. } Drury College, 1888	Springfield, Mo.	57 W.
Frederick Cowles Taylor, B.A. } Amherst College, 1884	Granby, Mass.	70 W.

Willard Brown Thorp, B.A. }	<i>Oxford, N. Y.</i>	100 W.
Amherst College, 1887 }		
Clyde Weber Votaw, B.A. }	<i>Geneva, O.</i>	15 E.
Amherst College, 1888 }		
Herbert Hart Waite, B.A. }	<i>Adams, N. Y.</i>	92 W.
Williams College, 1887 }		
Samuel Weyler, B.A. }	<i>Vitebsk, Russia</i>	74 W.
Knox College, 1888 }		
Elbridge Cutler Whiting, B.A. }	<i>Holliston, Mass.</i>	106 W.
Amherst College, 1888 }		
Walter Francis Willcox, B.A. }	<i>Malden, Mass.</i>	119 W.
Amherst College, 1884 }		
Benson Newell Wyman, B.A. }	<i>Dewittville, N. Y.</i>	91 W.
Oberlin College, 1886 }		
JUNIOR CLASS, 45		

SUMMARY

RESIDENT LICENTIATES,	.	.	.	.	.	2
GRADUATE CLASS, .	.	.	.	.	.	11
SENIOR CLASS, .	.	.	.	.	.	35
MIDDLE CLASS, .	.	.	.	.	.	40
JUNIOR CLASS, .	.	.	.	.	.	45
TOTAL, .	.	.	.	.	.	133

DEPARTMENT OF MEDICINE

(YALE MEDICAL SCHOOL)

GRADUATE STUDENTS

Charles Jenkins Foote, M.D. }	<i>New Haven, Conn.</i> 225 Crown st.
Harvard University, 1887 }	
William Ellison Lockwood, M.D. }	<i>New Haven, Conn.</i> 74 Pearl st.
Yale University, 1885 }	
William Harvey Stowe, M.D. }	<i>New Haven, Conn.</i> 43 Park st.
Yale University, 1888 }	

GRADUATE STUDENTS, 3

SENIOR CLASS

Thomas Stoddard Bronson, PH.B. }	<i>New Haven, Conn.</i> 1460 Chapel st.
Yale University, 1886 }	
William Joseph Sullivan, }	<i>New Haven, Conn.</i> 72 Olive st.
M.R.C.V.S. London }	

SENIOR CLASS, 2

MIDDLE CLASS

William Peck Andrews	<i>West Haven, Conn.</i> 109 Temple st.
Edward Robinson Baldwin	<i>Cheshire, Conn.</i> 200 York st.
John Steel Barnes	<i>Oxford, Conn.</i> 314 York st.
William John Burke	<i>New Haven, Conn.</i> Quinnipiac st.
Herbert Martin Clapp	<i>New Haven, Conn.</i> 24 Lincoln st.
Harry Burr Ferris, B.A. }	<i>Sound Beach, Conn.</i> 113 York st.
Yale University, 1887 }	
G. Skiff Ford	<i>New Haven, Conn.</i> 541 Howard av.

MIDDLE CLASS, 7

JUNIOR CLASS

William Pitt Baldwin, B.A. }	<i>New Haven, Conn.</i> 32 Martin st.
Yale University, 1888 }	
Frank Judson Bardwell	<i>Tunkhannock, Pa.</i> 37 Lynwood st.
Benjamin Austin Cheney, B.A. }	<i>New Haven, Conn.</i> 45 Elm st.
Yale University, 1888 }	

Harry Alfred Elcock	<i>New Haven, Conn.</i> 86 Henry st.
Henry Floyd Gamble, B.A. } Lincoln University, 1888 }	<i>Charlottesville, Va.</i> 12 Martin st.
Louis Joseph Gaynor	<i>New Haven, Conn.</i> 143 College st.
Charles Winthrop Hartwell	<i>New Haven, Ct.</i> 12 University pl.
George Isaac Hemingway	<i>Westville, Conn.</i> 20 Willard st.
Samuel Wellington Irving	<i>Birmingham, Conn.</i> 123 York st.
John Francis Kitson	<i>Hartford, Conn.</i> 150 College st.
Henry Frederick Klenke	<i>New Haven, Conn.</i> 48 St. John st.
Reuben Arthur Lockhart	<i>Bridgeport, Conn.</i> 297 York st.
James Henry McInerny	<i>Worcester, Mass.</i> 231 York st.
Archibald McNeill	<i>New Haven, Conn.</i> 149 Bradley st.
William John Mayer, D.D.S. } University of Pennsylvania, 1888 }	<i>New Haven, Conn.</i> 26 Bradley st.
Bismarck Robert Pinchback	<i>New Orleans, La.</i> 92 York sq.
Richard Michael Raymond	<i>Worcester, Mass.</i> 231 York st.
Carroll Sylvanus Shepard	<i>West Haven, Conn.</i> 43 Park st.
Shiukichi Shigemi, PH.B. } Yale University, 1888 }	<i>Imabari, Japan</i> 121 York st.
Clarence Edward Skinner	<i>Westville, Conn.</i> Westville
Patrick Francis Strapp	<i>Seymour, Conn.</i> Seymour
Charles Alling Tuttle, PH.B. } Yale University, 1888 }	<i>New Haven, Conn.</i> 364 Orchard st.
Richard Ward Westbrook	<i>New Haven, Conn.</i> 174 Olive st.

JUNIOR CLASS, 23

SUMMARY

GRADUATE STUDENTS,	3
SENIOR CLASS,	2
MIDDLE CLASS,	7
JUNIOR CLASS,	23
TOTAL,	35

DEPARTMENT OF LAW

(YALE LAW SCHOOL)

SENIOR CLASS

Robert Gorse Andrews	<i>New York City</i>	107 York st.
George Ansel Austin	<i>New Haven, Conn.</i>	9 Warren st.
Willoughby Maynard Babcock, B.A. } Yale University, 1887	<i>New Haven, Conn.</i>	86 Broadway
Jonathan Barnes, B.A. } Yale Univ., 1885, Attorney at Law	<i>Springfield, Mass.</i>	65 Grove st.
Rodmond Vernon Beach, B.A. } Yale University, 1887	<i>New Haven, Conn.</i>	320 Temple st.
George Emerson Beers, B.A. } Trinity College, 1886	<i>Southport, Conn.</i>	Southport
Lewis Sherrill Bigelow, B.A. } Yale University, 1887	<i>St. Paul, Minn.</i>	227 Crown st.
Nathaniel Wheeler Bishop	<i>Bridgeport, Conn.</i>	227 Crown st.
Henry Brant	<i>Ashland, O.</i>	255 Crown st.
Andrew Julius Brown, Jr.	<i>Yalesville, Conn.</i>	Yalesville
James Joseph Buchanan	<i>New Haven, Conn.</i>	12 Sylvan av.
Edward Grant Buckland, B.A. } Washburn College, 1887	<i>Great Bend, Kan.</i>	419 Temple st.
Alfred Coit, B.A. } Yale University 1887	<i>New London, Ct.</i>	407 Temple st.
William Hutchinson Cowles, B.A. } Yale University, 1887	<i>Chicago, Ill.</i>	101 W.
John Wright Cox, LL.B. } Univ. of Ga., 1885, Attorney at Law	<i>Atlanta, Ga.</i>	255 Crown st.
Henry Maurice Danneel	<i>New Orleans, La.</i>	121 York st.
John Ambrose Doolittle	<i>New Haven, Conn.</i>	367 Orange st.
Willard Robinson Douglass, B.A. } Yale University, 1887	<i>Leavenworth, Kan.</i>	261 Orange st.
Harris Gilbert Eames	<i>West Haven, Conn.</i>	West Haven
Antoine Joseph Ferrandini, } Attorney at Law	<i>Richmond, Va.</i>	107 York st.
Andrew Frink Gates, B.A. } Yale University, 1887	<i>Lebanon, Conn.</i>	64 W.
James Henry Hayden, PH.B. } Yale University, 1887	<i>Lake George, N. Y.</i>	258 Bradley st.
John Adams Heinson	<i>Dayton, O.</i>	395 Temple st.
Frederick James Holmes	<i>Wallingford, Conn.</i>	Wallingford
Frederick Buell Hungerford, B.A. } Yale University, 1886	<i>New Britain, Conn.</i>	217 York st.
Shikichi Iwasaki	<i>Tokio, Japan</i>	121 York st.
Frank Dyer Jackson, M.A. } Beloit College, 1887	<i>Janesville, Wisc.</i>	397 Temple st.

Edwin Kerrison	<i>Charleston, S. C.</i> 227 Crown st.
Daniel Andrew McWilliams	<i>New Haven, Conn.</i> 16 Hamilton st.
William Reuben Mattison, B.A. } Amherst College, 1886	<i>Waterbury, Conn.</i> 419 Temple st.
John Lewis Morehouse	<i>Fairfield, Conn.</i> Fairfield
Toshitake Okubo	<i>Tokio, Japan</i> 27 Lynwood st.
Henry Wilber Parker	<i>Danbury, Conn.</i> 107 York st.
Arthur Reed Pennell, B.A. } Yale University, 1887	<i>New Haven, Conn.</i> 1010 Chapel st.
Thomas Henry Penney, B.A. } Yale University, 1887	<i>New Haven, Conn.</i> 1010 Chapel st.
Arthur Perkins, B.A. } Yale University, 1887	<i>Hartford, Conn.</i> 114 College st.
Richard Paul Rendler	<i>New Haven, Conn.</i> 189 Church st.
Virgil Eugene Rorer	<i>Philadelphia, Pa.</i> 159 York st.
Oliver Perry Scaife, Jr.	<i>Allegheny, Pa.</i> 9 Library st.
William Dick Shupe, B.S. } Lebanon Valley College, 1887	<i>Mt. Pleasant, Pa.</i> 107 York st.
Carlos Hotchkiss Storrs, B.A. } Wesleyan University, 1887	<i>Seymour, Conn.</i> Seymour
Elmer Ellsworth Thomas, B.A. } National Normal University	<i>Ironton, O.</i> 395 Temple st.
William Trumbull, B.A. } Yale University, 1883	<i>Valparaiso, Chili</i> 178 Whitney av.
Thomas Clifford Waterous	<i>Hartford, Conn.</i>
James Albert Wilson	<i>Bridgeport, Conn.</i> Bridgeport
Albert Jacob Wise	<i>Lima, O.</i> 1010 Chapel st.

SENIOR CLASS, 46

JUNIOR CLASS

Frank Baker	<i>New Haven, Conn.</i> 58 Lombard st.
George Palmer Beebe	<i>E. Canaan, Conn.</i> 56 Whalley av.
John Bennetto, B.A. } Yale University, 1887	<i>New Haven, Conn.</i> 441 Orange st.
Frank Robert Bissell	<i>New Haven, Ct.</i> 165 Dixwell av.
James Patrick Bree	<i>New Haven, Ct.</i> 430 Blatchley av.
George Walter Bristol	<i>Milford, Conn.</i> Milford
Warren Henry Bristol	<i>New Haven, Conn.</i> 157 George st.
Edwin Frank Bugbee	<i>Willimantic, Ct.</i> 80½ Broadway
John Alexander Campbell, PH.B. } Drake University	<i>Marion, Ill.</i> 127 York st.
Wilfred Adams Clark	<i>N. Stonington, Ct.</i> 411 Temple st.
Harlan Ward Cooley, B.A. } Yale University, 1888	<i>Dubuque, Iowa</i> 116 W.
William Erwin Davis	<i>New Haven, Conn.</i> 80 Prince st.

Henry Nathan Dikeman	Waterbury, Conn.	312 Orange st.
Stephen Leland Dows, Jr.	Cedar Rapids, Iowa	46 Elm st.
Charles Gavin Duffy	Circleville, O.	150 College st.
Harry Cromwell Gibbons	Middletown, Conn.	36 Elm st.
Allen Arthur Gilbert	Sumter, S. C.	451 Howard av.
Henry Huntley Haight, B.A. }	Oakland, Cal.	311 York st.
Yale University, 1883 }	Mystic Bridge, Conn.	36 Court st.
Frank Hewitt Hinckley	Delphoo, O.	36 Court st.
Wilhelm Peter Hofferbert	Litchfield, Conn.	265 Orange st.
Frank Wells Hubbard, B.A. }	New Haven, Conn.	116 Howe st.
Yale University, 1888 }	New Haven, Conn.	12 Day st.
Orland Sidney Isbell, B.A. }	Reading, Pa.	311 York st.
Yale University, 1888 }	Meriden, Conn.	Meriden.
Louis Jacobs	New York City	62 w.
John Jacob Kutz, B.A. }	Harrisburg, Pa.	161 York st.
Yale University, 1888 }	Detroit, Mich.	130 Wall st.
Michael Armand Lefort	Bergen, N. Y.	505 Chapel st.
Charles Henry Ludington, Jr., B.A. }	Hartford, Conn.	Hartford
Yale University, 1887 }	New Haven, Conn.	72 Olive st.
Charles Berghaus McConkey, B.A. }	Washington C.H., O.	27 Wall st.
Yale University, 1888 }	W. Hampton Center, N. Y.	231 York st.
James Howard McMillan, B.A. }	Havana, Cuba	35 Howe st.
Yale University, 1888 }	New Haven, Ct.	220 Whalley av.
Herbert James Menzie, B.A. }	Meriden, Conn.	Meriden
University of Rochester, 1886 }	New Haven, Conn.	267 Orange st.
Burton Louis Newton	Auburn, N. Y.	101 w.
William Joseph O'Sullivan	Dayton, O.	46 Elm st.
George Madison Pavey, B.A. }	Belleville, Ill.	409 Temple st.
Yale University, 1888 }	New Haven, Conn.	284 Crown st.
Robert Seney Pelletreau	Astoria, N. Y.	64 w.
John Francis Poey	Sandy Hook, N. Y.	228 Crown st.
Philip Pond, 2d, B.A. }	Denver, Col.	62 w.
Yale University, 1888 }		
Richard John Reilly		
John Emerson Ricketts		
William Henry Seward, Jr., B.A. }		
Yale University, 1888 }		
Edgar Montgomery Thacher		
Bissell Thomas		
Francis Bacon Trowbridge, B.A. }		
Yale University, 1887 }		
Winthrop Turney, B.A. }		
Yale University, 1888 }		
Paul Beers Warner		
Frank Lincoln Woodward, B.A. }		
Yale University, 1888 }		

GRADUATE STUDENTS

Daniel Everitt Leary, LL.B.	}	<i>Enfield, Conn.</i>	1173 Chapel st.
Yale Univ., 1888, Attorney at Law			
Kojiro Matsugata, LL.B.	}	<i>Tokio, Japan</i>	363 Elm st.
Yale Univ., 1888, Attorney at Law			
Matsuo Ogura, LL.B.	}	<i>Tokio, Japan</i>	381 Crown st.
Yale Univ., 1888, Attorney at Law			
Frank Dunlap Pavay, LL.B.	}	<i>New Haven, Conn.</i>	27 Wall st.
Yale Univ., 1886, Attorney at Law			
William Elisha Prentice, LL.B.	}	<i>Batavia, N. Y.</i>	175 Chapel st.
Yale Univ., 1888, Attorney at Law			
Clement Darling Rinehart, LL.B.	}	<i>Fredericktown, O.</i>	419 Temple st.
Yale University, 1888			
Robert Wright Stewart, LL.B.	}	<i>Cedar Rapids, Ia.</i>	419 Temple st.
Yale Univ., 1888, Attorney at Law			
Erwin Llewellyn Thorpe, M.L.	}	<i>West Haven, Conn.</i>	69 Center st.
Yale University, 1887			
Soichi Tsuchiya, LL.B.	}	<i>Tokio, Japan</i>	125 Dwight st.
Yale Univ., 1888, Attorney at Law			
George Dutton Watrous, M.L.	}	<i>New Haven, Conn.</i>	58 Wall st.
Yale Univ., 1884, Attorney at Law			
John Wurts, LL.B.	}	<i>Jacksonville, Fla.</i>	65 Whitney av.
Yale Univ., 1884, Attorney at Law			

GRADUATE STUDENTS, 11

SPECIAL STUDENTS

Austin Ira Batchelder		<i>Wenham, Mass.</i>	228 Crown st.
Matthew Griswold, Jr., PH.B.	}	<i>Erie, Pa.</i>	38 High st.
Yale University, 1888			
Frederick Wightman Moore, B.A.	}	<i>New Haven, Conn.</i>	409 Temple st.
Yale University, 1886			
Robert Clark Morris		<i>Bridgeport, Conn.</i>	Bridgeport
Robert Thorne, M.A.	}	<i>Brooklyn, N. Y.</i>	221 Wooster st.
Trinity College, 1888			

SPECIAL STUDENTS, 5

SUMMARY

SENIORS,	46
JUNIORS,	44
GRADUATE STUDENTS,	11
SPECIAL STUDENTS,	5
TOTAL,	106

SUMMARY OF STUDENTS

DEPARTMENT OF PHILOSOPHY AND THE ARTS:

GRADUATE COURSES	-	-	-	79
YALE COLLEGE	-	-	-	688
SHEFFIELD SCIENTIFIC SCHOOL	-			308
ART SCHOOL	-	-	-	47
				<hr style="width: 50px; display: inline-block; vertical-align: middle;"/> 1122
YALE DIVINITY SCHOOL	-	-	-	133
YALE MEDICAL SCHOOL	-	-	-	35
YALE LAW SCHOOL	-	-	-	106
				<hr style="width: 50px; display: inline-block; vertical-align: middle;"/>
				1396
Deduct for names inserted twice	-			31
				<hr style="width: 50px; display: inline-block; vertical-align: middle;"/>
TOTAL	-	-	-	1365

DEGREES CONFERRED IN 1888

BACHELOR OF ARTS

Edmund Allen	Asa Oran Gallup
Hallock Calvin Alvord	George Metcalf Gill
Edward Francis Ayres	William Clark Gordon
Charles Francis Baldwin	Harold Russell Griffith
William Pitt Baldwin	Henry Huntley Haight
Harry Beecher	Alfred Hand, Jr.
Jesse Hatch Behrends	Daniel Bailey Hardenbergh
Francis Bergstrom	Eugene Wendell Harter
William Bascom Bissell	Frank Rufus Herrick
Henry Whiting Boies	James Ormerod Heyworth
Clayton Harcourt Brigham	Frank Wells Hubbard
William Barrett Brinsmade	Dorr Albert Hudson
George Olney Brott	Richard Melancthon Hurd
Louis Righter Brown	Orland Sidney Isbell
Henry Barnard Brownell	John Couzu Kebabian
Philip Dibble Bunce	Charles Allen Klots
Arthur Kennard Buxton	John Jacob Kutz
William Campbell	Wolcott Griswold Lane
Laurance Johnson Carmalt	Jesse Thomas Lazear
John Franklin Carter	Theodore Lockwood Leverett
Benjamin Austin Cheney	Solomon Oliver Levinson
William Spencer Clark	Clarence Wyman Lincoln
Harlan Ward Cooley	William Loving, Jr.
Charles Edward Cornwall	Harry Weber McCauley
Willis Gaylord Cosad	Charles Berghaus McConkey
Harry Hall Covell	Joseph McElroy, Jr.
Samuel Monod Cross	James Howard McMillan
Thomas Burnham Enders	Frederic William Mar
Edward Sherman Farrington	Gard Maynard
Edward Colton Fellows	Duncan Salisbury Merwin
Dudley Ferguson	Carl Meyer
Irving Fisher	Frank Vincent Millard
William Howard Fitzgerald	Arthur Lewis Moore
George Barber Fowler	David Whipple Morison
Hervey Richards Franklin	Charles Neave

Harold VanMeter Ogden	Henry Lewis Stimson
Frederic Holmes Paine	William Stephen Stone
Lucius Noyes Palmer	John Hudson Storer
William Andrews Parshall	Henry Strunz
Edwin Parsons	Eliphalet Bradford Terry
George Madison Pavey	Edward Seymour Thomas
Harrison Gray Platt	Hector William Thomas
Frederic Hopkins Pomroy	Frank Lincoln Thompson
Charles Edward Pond	Frank Burr Tibbals
Philip Pond	Edward Montclair Tillinghast
Herbert Warren Porter	Elbert Reynolds Tillinghast
Alfred Raymond	Herbert Cushing Tolman
Thomas Emerson Ripley	Winthrop Turney
Samuel Sidney Breese Roby	Willard Lamb Velie
Thomas Frederic Sanford	Fred Ayer Verplanck
James Robert Seeley	Morison Remich Waite, Jr.
William Henry Seward, Jr.	Samuel Johnson Walker
Fred Palmer Solley	Brownlee Robertson Ward
Amos Alonzo Stagg	William Drew Washburn, Jr.
Leo Stein	Asher Miner Wellman
Bernard Christian Steiner	Monroe Nichols Wetmore
Henry Ebenezer Stevens, Jr.	Arthur White
Edward Albert Stevenson	Porter Gouverneur Willett
Frederic Augustus Stevenson	Frank Lincoln Woodward
Ephraim Miller Youmans	

MASTERS OF ARTS

William Adams Brown, B.A. {	Edward Johnson Phelps, B.A. {
Yale University, 1886 }	Yale University, 1886 }
Wayland Irving Bruce, B.A. {	John Christopher Schwab, B.A. {
Yale University, 1882 }	Yale University, 1886 }
Calvin Dickey, B.A. {	Philip Battell Stewart, B.A. {
Yale University, 1886 }	Yale University, 1886 }
George Augustus Eliot, B.A. {	Henry Stephens Washington, B.A. {
Yale University, 1886 }	Yale University, 1886 }
Edward Augustus George, B.A. {	Herbert Henry White, B.A. {
Yale University, 1885 }	Yale University, 1886 }
David Denison Lambert, B.A. {	
Yale University, 1886 }	

BACHELORS OF PHILOSOPHY

John Childe Anderson	George Converse Kimball
Joseph Albright Archbald	Felix Kleeberg
William Hill Bean	Edward Lambert Leeds
Charles Bart Berger	Thomas Albert Legler, Jr.
George Bart Berger	Louis LeSassier
William Tillinghast Bull	Edwin Hoyt Lockwood
George Robert Carter	Samuel Harkness McCrea, Jr.
William Clarke Catlin	Henry Swan Manning
James Henry Coleman	George Grant Mason
George David Colton	William Smith Mason
William Williams Crehore, B.A. }	Charles Griffin Miller
Yale University, 1886 }	Edward Steward Moore
Charles Edward Curtis	James Augustus Nelson
Richard Sydney Curtiss	Charles Norris, Jr.
Jesse Chase Dann	Elbert Ellsworth Norton
Henry Lewis Davis	Selden Yale Osborn
George Howard Davison	Franklin T. Parlin
William Henry Davol, Jr.	John Erskine Patrick
Carlton Melville DeWolf	Francis Cole Pratt
Robert Russel Dickey	John Goodell Prouty
John Eufemio Dockendorff	George Brinckerhoff Richards
John Feeter Easterbrook	Edwin Wright Robinson
Henry Hays Ellis	John Rogers, Jr., B.A. }
Frank Harold Farquhar	Yale University, 1887 }
John Ellis Field	Henry Charles Schwab
Richard Huntington Franchot	Charles Kirtland Shelton
Deane Funk	Philemon Tecumseh Sherman, B.A. }
George Francis Garneau, B.A. }	St. Louis University, 1886 }
St. Louis University, 1886 }	Shiukichi Shigemi
Henry Kellogg Goetchius	William Wheelwright Skiddy
James Douglas Gold	Ernest Ellsworth Smith
Franklin Moses Gray	Percy Franklyn Smith
Howard Greer, Jr.	Ralph Hebert Smith
Matthew Griswold, Jr.	Frederick William Spanutius
Fred R. Hamlin	Charles Weaver Stewart
Harry Leon Hamlin	Howard Canning Taylor
Horace Sedgwick Hart, B.A. }	William Conquest Tucker
Yale University, 1887 }	Charles Alling Tuttle
Charles Merriitt Hemingway	Morgan Walcott
Noble Foster Hoggson	Ralph McIntosh Wilcox
Howard Livingstone Isbell	Frank Clark Woodruff
Harry Garrybrant Jenner	George Stanley Woodward, B.A. }
Cyrus Field Judson	Yale University, 1887 }

MECHANICAL ENGINEER

Calvert Townley, PH.B. Yale University, 1886

DOCTORS OF PHILOSOPHY

Clarence Fassett Castle, M.A. }	William Henry Parks, B.A. }
Denison University, 1883 }	Yale University, 1886 }
Mark Wilson Chunn, B.A. }	James Johnson Robinson, B.A. }
Western Maryland College, 1882, }	College of New Jersey, 1884 }
B.D. Yale University, 1886 }	

BACHELORS OF DIVINITY

Lewin Frank Buell, B.A. }	Philip Hannibal Mason, B.A. }
Yale University, 1885 }	Carleton College, 1883 }
Empson Cory, B.A. }	Alexander Milne
Wabash College, 1885 }	Henry Harvey Morse, B.A. }
William Watts Davidson, B.A. }	Amherst College, 1885 }
Yadkin College, 1880 }	Lyman Plimpton Peet, B.A. }
Henry Davies	Yale University, 1885 }
Charles Allen Dinsmore	James Bronson Reynolds, B.A. }
Franklin LaDu Ferguson	Yale University, 1884 }
Frederick Davis Greene, B.A. }	Charles Nichols Severance
Amherst College, 1885 }	Frank Varnum Stevens, B.A. }
John Edward Herman	Carleton College, 1884 }
D. Melancthon James, B.A. }	Lucius Harrison Thayer, B.A. }
Randolph-Macon College, 1881 }	Amherst College, 1882 }
Lewis Franklin John, B.A. }	Erwin Llewellyn Thorpe, B.A. }
Otterbein University, 1883 }	Baker University, 1877 }
Frank Fales Lewis, B.A. }	John Oliver Thrush, B.A. }
Beloit College, 1884 }	Lebanon Valley College, 1884 }
Charles Loomis, B.A. }	Frank VanAllen, B.A. }
Amherst College, 1882 }	Yale University, 1885 }
Frank Ranney Luckey, B.S. }	Henry Horace Williams, M.A. }
Cornell University, 1882 }	University of North Carolina, 1883 }
Franklin Pierce Lynch, B.A. }	John Churchwood Wilson, B.A. }
University at Lewisburg, 1884 }	Amherst College, 1885 }
Robert Luvern Marsh, B.A. }	George Heber Woodhull, B.A. }
Nebraska University, 1884 }	Yale University, 1885 }

DOCTORS OF MEDICINE

Edward Charles Beach	Charles Ross Jackson
Louis Bennett Bishop, B.A. }	Moses Kleiner
Yale University, 1886 }	Harry Ranney Stiles
Thomas Matthew Cahill	William Harvey Stowe

BACHELORS OF LAWS

Allen Charles Alderman	William Krieger, LL.B. }
Frederick Augustus Bartlett	University of Louisville, 1887 }
Benjamin B. Beekman, B.A. }	Daniel Everitt Leary
Oregon State University, 1884 }	Thomas Patrick McCue
John Marvin Blakeley, PH.B. }	Frank Hayes McFarland, LL.B. }
Yale University, 1886 }	Cumberland University, 1887 }
Wilbur Franklin Booth, B.A. }	Kojiro Matsugata
Yale University, 1884 }	Robert Vaughn Montague
Adna Guernsey Bowen	Matsuo Ogura
Hubert Wilson Butler	Charles Herbert Peck
Jonathan Wright Chapin	Robert James Pitkin, B.A. }
James Lewis Cowles, B.A. }	Yale University, 1885 }
Yale University, 1886 }	William Elisha Prentice, B.S. }
Clarence Eugene Cundall	Rochester University, 1884 }
Thomas Mills Day, Jr. B.A. }	Clement Darling Rinehart
Yale University, 1886 }	George Washington Robinson
Allen Boyd Forbes, LL.B. }	James Edward Russell, B.A. }
Northwestern University, 1886 }	St. John's College, 1886 }
Charles Jay Greene	Arthur Leffingwell Shipman, B.A. }
Charles Jared Griggs, B.A. }	Yale University, 1886 }
Yale University, 1886 }	Robert Wright Stewart, B.S. }
Stevie Michel Hoyer	Coe College, 1886 }
James Fawcett Hunt	Lyman Twining Tingier
Patrick Kane	Soichi Tsuchiya
Frank Harrison Kelley, Jr.	Bacon Wakeman
Howard Nichols Wakeman	

MASTERS OF LAWS

Livingston Warner Cleaveland, LL.B. }	Eben Whitney, LL.B. }
Yale University, 1881 }	Yale University, 1887 }

HONORARY DEGREES:

DOCTOR OF DIVINITY

Rev. Francis Landey Patton, D.D., LL.D., President of the College of New Jersey

DOCTORS OF LAWS

William Tod Helmuth, M.D.
Stanley Matthews, Justice of the Supreme Court of the United States
Samuel Clarke Perkins, B.A. 1848
Henry Cornelius Robinson, B.A. 1853
Andrew Dickson White, B.A. 1853, late President of Cornell University
William Collins Whitney, B.A. 1863, Secretary of the Navy

MASTERS OF ARTS

Alvey Augustus Adee
 Charles Griswold Bartlett
 George Bendelari, B.A. Harvard University 1874
 Samuel Langhorne Clemens
 Commander Caspar Frederick Goodrich, United States Navy
 William Henry Jordan
 Hanns Oertel
 Stephen Pierson, M.D.
 Alfred Lawrence Ripley, B.A. 1878
 Rev. Elias Benjamin Sanford, B.A. Wesleyan University 1865
 Henry Stoddard, LL.B.
 Frederick Wesson

 APPOINTMENTS FOR COMMENCEMENT,

YALE COLLEGE, JUNE 27, 1888

ORATIONS

IRVING FISHER
 ORLAND SIDNEY ISBELL
 HENRY LEWIS STIMSON
 BERNARD CHRISTIAN STEINER
 JOHN FRANKLIN CARTER
 WILLIAM PITT BALDWIN
 JESSE HATCH BEHREND

[The names in the following groups are in alphabetical order.]

Edward Francis Ayres
 Charles Edward Cornwall
 Edward Sherman Farrington
 Daniel Bailey Hardenbergh
 William Loving, Jr.

Harry Weber McCauley
 Harold VanMeter Ogden
 Henry Ebenezer Stevens, Jr.
 Herbert Cushing Tolman

Henry Barnard Brownell
 Harlan Ward Cooley
 Edward Colton Fellowes
 Asa Oran Gallup
 Theodore Lockwood Leverett
 Frederick William Mar

Duncan Salisbury Merwin
 Carl Meyer
 William Andrews Parshall
 Harrison Gray Platt
 Thomas Frederic Sanford
 Fred Palmer Solley

DISSERTATIONS

George Olney Brott
 Philip Dibble Bunce
 Eugene Wendell Harter
 Clarence Wyman Lincoln

Philip Pond
 Frank Burr Tibbals
 Morison Remich Waite

DISPUTES

Willis Gaylord Cosad
George Barber Fowler

Moses Jacob Husinsky
Frank Vincent Millard

Hallock Calvin Alvord
William Campbell
Laurance Johnson Carmalt
Alfred Hand, Jr.
Richard Melancthon Hurd
Charles Allen Klots
Gard Maynard

Arthur Lewis Moore
Leo Stein
Edward Seymour Thomas
Hector William Thomas
Frank Lincoln Thompson
Elbert Reynolds Tillinghast
Frank Lincoln Woodward

COLLOQUIES

Winthrop Grant Bushnell
Thomas Burnham Enders
Frank Rufus Herrick
John Jacob Kutz

James Howard McMillan
James Robert Seeley
William Henry Seward, Jr.

William Bascom Bissell
Arthur Kennard Buxton
Benjamin Austin Cheney
William Spencer Clark
Harry Hall Covell
Hervey Richards Franklin
George Metcalf Gill
Harold Russell Griffith
Henry Huntley Haight
Frank Wells Hubbard
Dorr Albert Hudson

John Couzu Kebabian
Joseph McElroy, Jr.
Charles Neave
George Madison Pavey
Alfred Raymond
Edward Albert Stevenson
Frederic Augustus Stevenson
William Stephen Stone
Henry Strunz
William Drew Washburn

SPECIAL HONORS

TWO-YEAR HONORS

In Ancient Languages:
Harry Weber McCauley
Thomas Frederic Sanford
Bernard Christian Steiner
Frank Lincoln Thompson
Herbert Cushing Tolman
In Modern Languages:
William Loving, Jr.

In Natural and Physical Sciences:
Henry Barnard Brownell
In Mathematics:
Edward Francis Ayres
Irving Fisher
In Political Science, History, Law:
Orland Sidney Isbell
Carl Meyer
Harrison Gray Platt

ONE-YEAR HONORS

In Philosophy:
Irving Fisher
William Clark Gordon
In Political Science, History, Law:
William Campbell
In Natural and Physical Science:
Edward Francis Ayres
Clarence Wyman Lincoln
Frederic William Mar

In English:
Asa Oran Gallup
Daniel Bailey Hardenbergh
Eugene Wendell Harter
Thomas Frederic Sanford
Henry Lewis Stimson
In Ancient Languages:
Duncan Salisbury Merwin

APPOINTMENTS FOR JUNIOR EXHIBITION,

YALE COLLEGE, MARCH 22, 1888

PHILOSOPHICAL ORATIONS

LESTER BRADNER, JR.
 JOSEPH RALPH ENSIGN
 WILLIAM ADOLPHE McQUAID
 OLIVER HUNTINGTON RICHARDSON
 FERDINAND SCHWILL
 HORACE FLETCHER WALKER

ORATIONS

William Pope Aiken
 John Wallace Banks
 George Coggill
 Charles Foster Kent
 William Herbert Page
 Harry Lathrop Reed

Edmund Daniel Scott
 Herbert Augustine Smith
 Andrew Ludwig Winters
 George Washington Woodruff
 Horace Wylie

Burr Reeve Abbe, Jr.
 William Whitney Ames
 Ernest Smith Bishop
 Arthur May Hyde
 Charles William Lefler
 A. Henry Mosle

Edward Lambe Parsons
 Samuel Newman Pond
 Frederic Henry Sanford
 Frederick Andrew Scott
 Lewis Sheldon Welch
 Howard Hunter Williams

DISSERTATIONS

Dwight Walter Bissell
 Safford Arnold Crummey
 Thomas Elliott Donnelley
 John Cornelius Griggs
 Thomas Hanlon, Jr.

Edward Barrett Hinckley
 George Lyman Lamphier
 Gifford Pinchot
 Charles Sanford Skilton

DISPUTES

William Herbert Corbin
 Thomas Mitchel Cullinan
 Frederick Wesley Ellis
 Baruch Israeli
 Elmer Francis Letcher
 William Ross Matson
 Charles Cook Paulding

George Clarke Peck
 Robert Treat Platt
 Charles Hitchcock Sherrill
 Lewis Austin Storrs
 Howard Wills Vernon
 Hubert Wetmore Wells
 Philip Patterson Wells

Charles Twing Brooks
 William Chester DeF. Dickinson
 Albert Myrick Freeman
 Joseph Sprigg McMahon
 John Ball Osborne

Charles G. Reynolds
 Henry Seymour Robinson
 William Hayden Rockwell
 Thomas Gaskell Shearman
 Charles Milnor Washington

COLLOQUIES

William Lucius Armstrong
Freeman Davidson Baerman
Philip Embury Browning
Benjamin Willard Jacobs

Henry Eager Mason
Harry Ford Noyes
Langdon Trufant Snipe
Joseph Parsons Tuttle

Henry Cornelius Atkins
Horace Bennet Bartholemew
Claude Lamot Forbes
Edward James Gavegan
Charles Otis Gill
Porter Beach Godard
Leverett Lord Hull

Robt. Watkinson Huntington, Jr.
Robert Lee Luce
Mark Edward Merrifield
Henry Judson Sage
Horace Sheldon Stokes
John Underhill
Charles Abernethy Valentine

UNDERGRADUATE SCHOLARS OF THE HOUSE, YALE
COLLEGE, FOR THE YEAR 1888-89:

WOOLSEY Scholar, Class of 1889—HORACE FLETCHER WALKER.

WOOLSEY Scholar, Class of 1890—CHARLES FRANCIS SMALL.

WOOLSEY Scholar, Class of 1891—JOHN JOUGHIN COX.

HURLBUT Scholar, Class of 1891—NATHAN GLICKSMAN.

THIRD Freshman Scholars, Class of 1891—WILLIAM TENNEY BARTLEY,
CURTIS CLARK BUSHNELL.

UNIVERSITY PRIZES, AWARDED IN JUNE, 1888:

JOHN A. PORTER Prize—James H. Tufts, B.A., of the Middle Class in the Divinity School; with special commendation of William Trumbull, B.A., of the Junior Class in the Law School, and Evans Woollen, B.A., of the Graduate Department.

Committee of Award: Walter Allen, Esq., of New Haven;

Professor Arthur T. Hadley, of New Haven;

John A. Porter, Esq., of Washington, D. C.

COBDEN CLUB Medal, Class of 1888—William A. Parshall, of the Academical Department.

PRIZES AWARDED IN YALE COLLEGE, 1887-88:

- DEFOREST Prize Medal, Class of 1888—Henry L. Stimson.
- TOWNSEND Premiums, Class of 1888—Harlan W. Cooley, Irving Fisher, Harold R. Griffith, Orland S. Isbell, Fred P. Solley.
- DEFOREST Mathematical Prizes, Class of 1888—1st Prize, Irving Fisher; 2d Prize, Edward F. Ayres. Class of 1889—Edward B. Hinckley. Class of 1890—1st Prize, Albert C. Crehore; 2d Prizes, Charles B. Bliss, William C. Lusk; 3d Prize, Frederick Bedell. Class of 1891—1st Prizes, Lyle A. Dickey, Hyppolyte W. Gruener; 2d Prizes, Nathan Glicksman, Ray B. Smith; 3d Prizes—Curtis C. Bushnell, Frank A. Dillingham, Theodore S. Hart, William N. Thatcher.
- SCOTT Prize in German, Class of 1888—William Loving, Jr.
- SCOTT Prize in French, Class of 1889—Gifford Pinchot.
- WINTHROP Prizes, Class of 1889—1st Prize, Harry L. Reed; 2d Prize, George W. Woodruff.
- JUNIOR EXHIBITION Prizes, Class of 1889—1st Prize, Lewis S. Welch; 2d Prizes, Thomas E. Donnelley, John C. Griggs, William A. McQuaid, Edward L. Parsons, Herbert A. Smith, Lewis A. Storrs, Hubert W. Wells.
- COMPOSITION Prizes, Class of 1890—1st Prizes, William H. Beckford, John W. Corwith, John Crosby, Jr., George H. Hotaling; 2d Prizes, Roland Holt, Ralph A. McDonnell, Herbert Parsons, Stowe Phelps; 3d Prizes—Roger S. Baldwin, Arthur W. Colton, Wolcott W. Ellsworth, Richard T. Percy. (With special commendation of J. W. Corwith's work, both in the prize competition and throughout the year.)
- DECLAMATION Prizes, Class of 1890—1st Prizes, Frank T. Brooks, Walter A. DeCamp; 2d Prizes, William T. Brown, Harry E. Pratt; 3d Prizes, Solomon C. Mead, Sidney N. Morse.
- BERKELEY Premiums, Class of 1891—1st Grade, William T. Bartley, Curtis C. Bushnell, John J. Cox, Nathan Glicksman, William P. Graves; 2d Grade, Grosvenor Atterbury, Cecil K. Bancroft, Howard T. Kingsbury, Samuel W. B. Moorhead, Clifford G. Twombly.
- SPECIAL Prize for Excellence in Mathematics at the Woolsey Scholarship Examination, Class of 1891—Lyle A. Dickey.
- HUGH CHAMBERLAIN Greek Prize, Class of 1892—Divided between Bernard M. Allen, from Phillips Academy, Andover, Massachusetts, and Emanuel F. Snyder, from the South Division High School, Chicago, Illinois; Honorable Mention is also made of Henry B. Hinckley, from the New Church School, Waltham, Massachusetts, and William L. Kitchel, from the New Haven (Connecticut) High School.

PRIZES AWARDED IN THE SHEFFIELD SCIENTIFIC
SCHOOL, JUNE, 1888:

Class of 1888:

- FOR EXCELLENCE IN CIVIL ENGINEERING—Morgan Walcott, with honorable mention of James A. Nelson.
FOR EXCELLENCE IN MECHANICAL ENGINEERING—Edwin H. Lockwood, with honorable mention of Howard L. Isbell and Percy F. Smith.

Class of 1889:

- FOR EXCELLENCE IN THE MATHEMATICS OF THE JUNIOR YEAR—The prize divided between Frederick H. Ellsworth and William B. Morrison, with honorable mention of Kenyon V. Painter.
FOR EXCELLENCE IN GERMAN—Charles E. Stone, with honorable mention of Boynton W. McFarland and William B. Morrison.

Class of 1890:

- FOR EXCELLENCE IN ALL THE STUDIES OF THE FRESHMAN YEAR—Alexander W. Evans, with honorable mention of Willis J. Fenn.
FOR EXCELLENCE IN CHEMISTRY—Harvey M. Lawson, with honorable mention of Alexander W. Evans.
FOR EXCELLENCE IN PHYSICS—The prize divided between Julian Du Bois and Alexander W. Evans, with honorable mention of Willis J. Fenn, Oliver S. Lyford, Jr., and Walter Dodge.
FOR EXCELLENCE IN MATHEMATICS—The prize divided between Alexander W. Evans and Willis J. Fenn, with honorable mention of Frank R. Rich.
FOR EXCELLENCE IN GERMAN—Alexander W. Evans.
FOR EXCELLENCE IN MECHANICAL DRAWING—Willis J. Fenn.

PRIZE AWARDED IN THE SCHOOL OF THE FINE ARTS,
JUNE, 1888:

ETHEL CHILDE WALKER PRIZE—Irving E. Hurlbut.

PRIZES AWARDED IN THE YALE MEDICAL SCHOOL, 1888:

- KEESE PRIZE, Class of 1888—Charles R. Jackson, with honorable mention of William H. Stowe.
CAMPBELL PRIZE, Class of 1888—Harry R. Stiles.

PRIZES AWARDED IN THE YALE LAW SCHOOL, JUNE, 1888:

TOWNSEND PRIZE (\$100), for pronouncing the best Oration at graduation
—Robert W. Stewart, Cedar Rapids, Iowa.

Committee of Award: Hon. Andrew D. White, LL.D., Ithaca, N. Y.;
Hon. J. Twing Brooks, Salem, Ohio;
George M. Sharp, Esq., Baltimore, Md.

JEWELL PRIZE (\$50), for the best Examination at graduation—Wilbur
F. Booth, B.A.

O. S. SEYMOUR PRIZE (\$60), to that member of the graduating class who
has made the greatest improvement in scholarship during both
years of his course—Patrick Kane.

BETTS PRIZE (\$50), to the member of the Junior Class receiving the
highest marks at his annual examination—Charles W. Pierson,
B.A.

HONORS:

SENIOR CLASS:

Degree of LL.B., *magna cum laude*

Wilbur F. Booth, B.A., Robert J. Pitkin, B.A.

Degree of LL.B., *cum laude*

Benj. B. Beekman, B.A., John M. Blakeley, Ph.B., Thomas M. Day, Jr.,
B.A., Clement D. Rinehart, Arthur L. Shipman, B.A., Robert W.
Stewart, B.S.

JUNIOR CLASS:

Honorable mention for excellence at the annual examination:

Charles W. Pierson, B.A., Willoughby M. Babcock, B.A., George E.
Beers, B.A., Edward G. Buckland, B.A., Alfred Coit, B.A.,
Samuel Knight, B.A., Arthur R. Pennell, B.A., Thomas H.
Penney, B.A.

DIRECTORY OF OFFICERS

ABBOTT, FRANK F., Tutor (153 F.) 83 Grove st.	COLLIER, M. DWIGHT, Lecturer N. Y. City
ADAMS, GEORGE B., Professor (244 L.) 77 Elm st.	COMSTOCK, WILLIAM J., Instructor 168 York st.
BAILEY, MARK, Instructor (150 F.) 442 Temple st.	CROSS, WILBUR L., Proctor 153 F.
BALDWIN, SIMEON E., Professor (25 White's B'd'g.) 44 Wall st.	DANA, EDWARD S., Professor (4 P.) 111 Grove st.
BARNEY, SAMUEL E., Instructor 148 Whalley av.	DANA, JAMES D., Professor (6 P.) 24 Hillhouse av.
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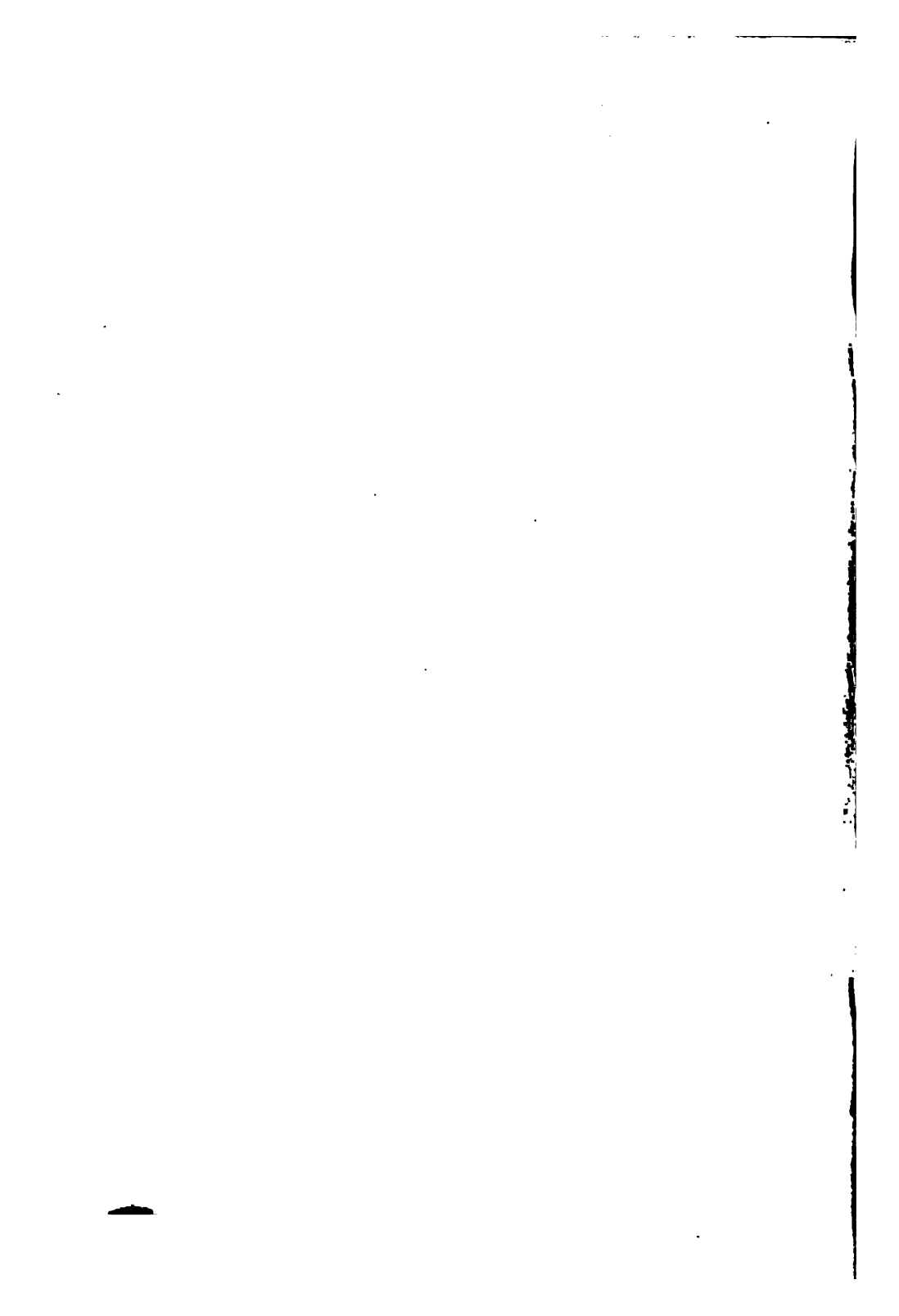
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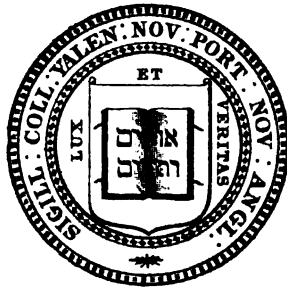
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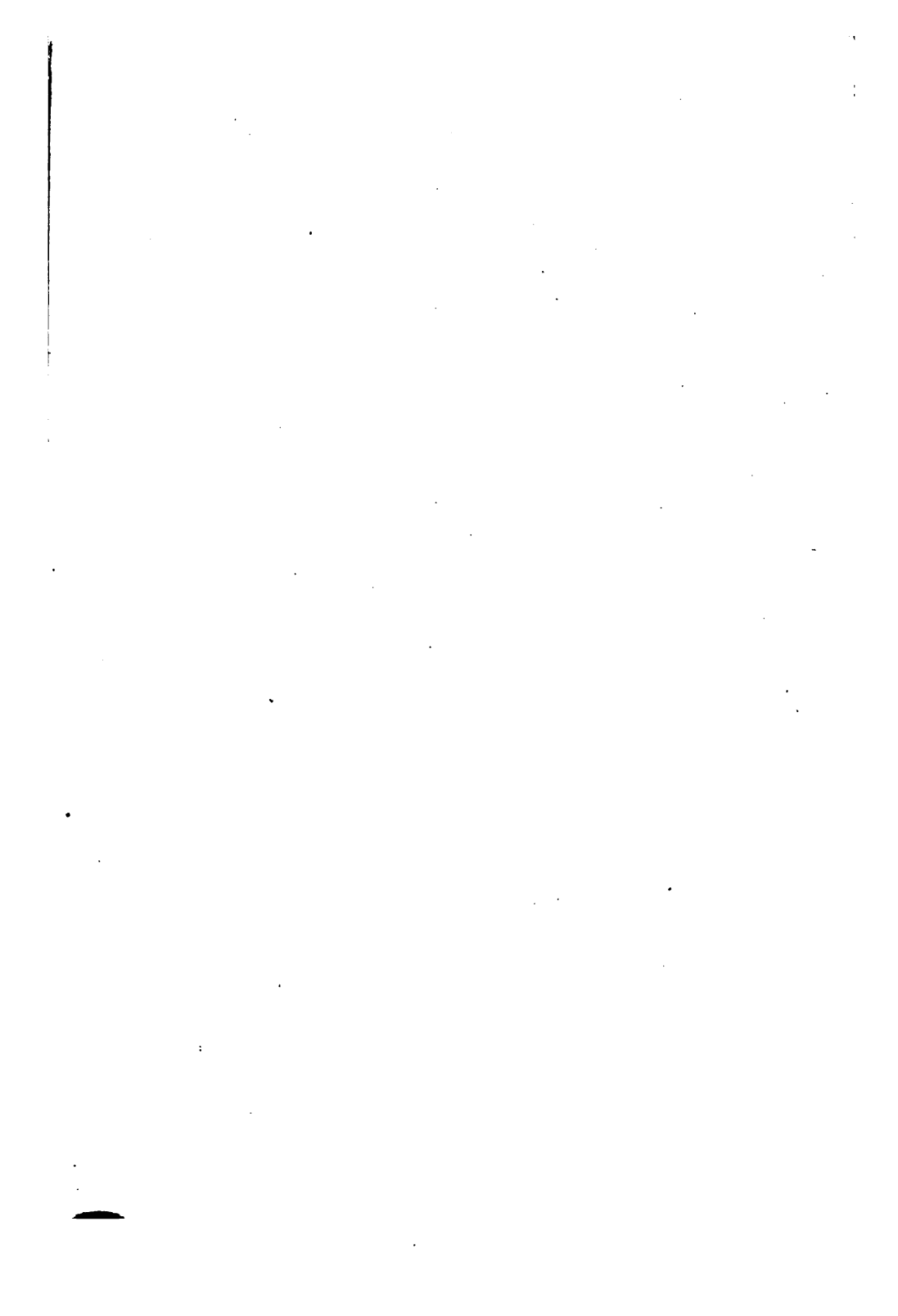


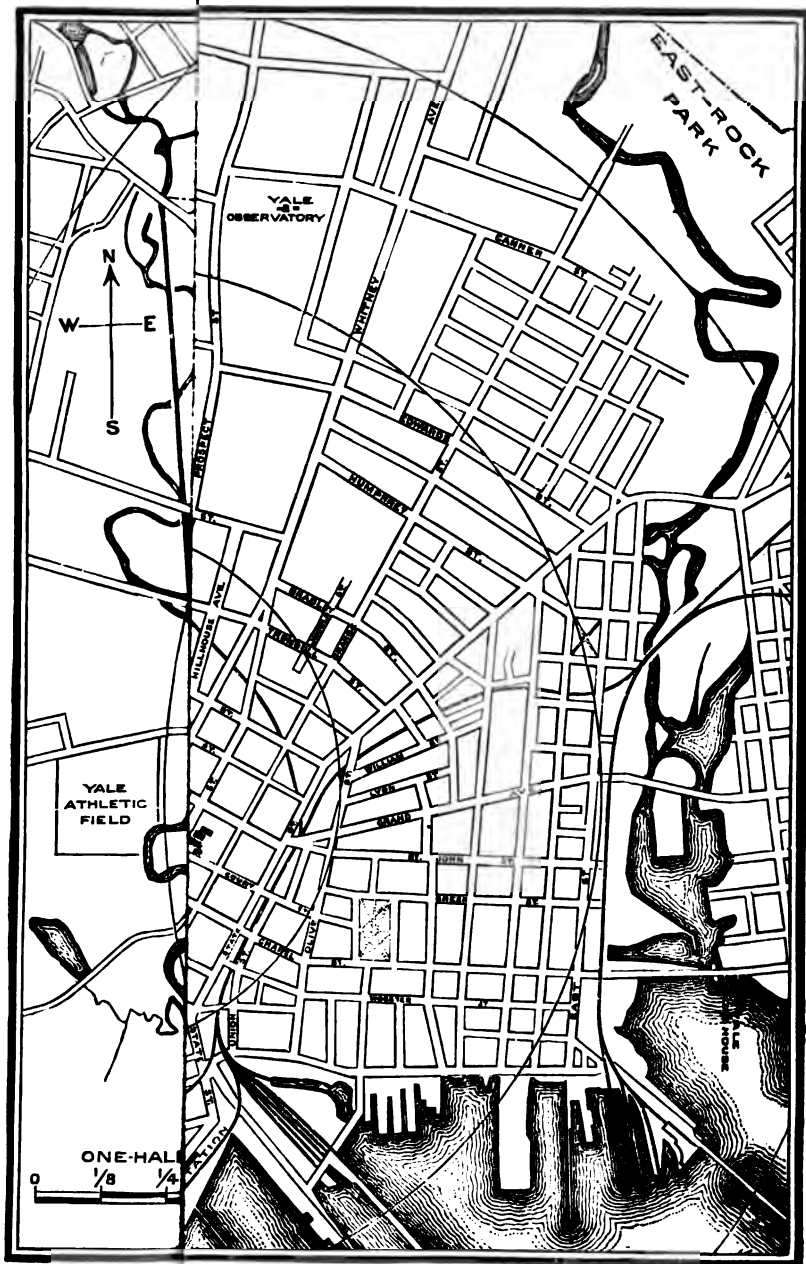


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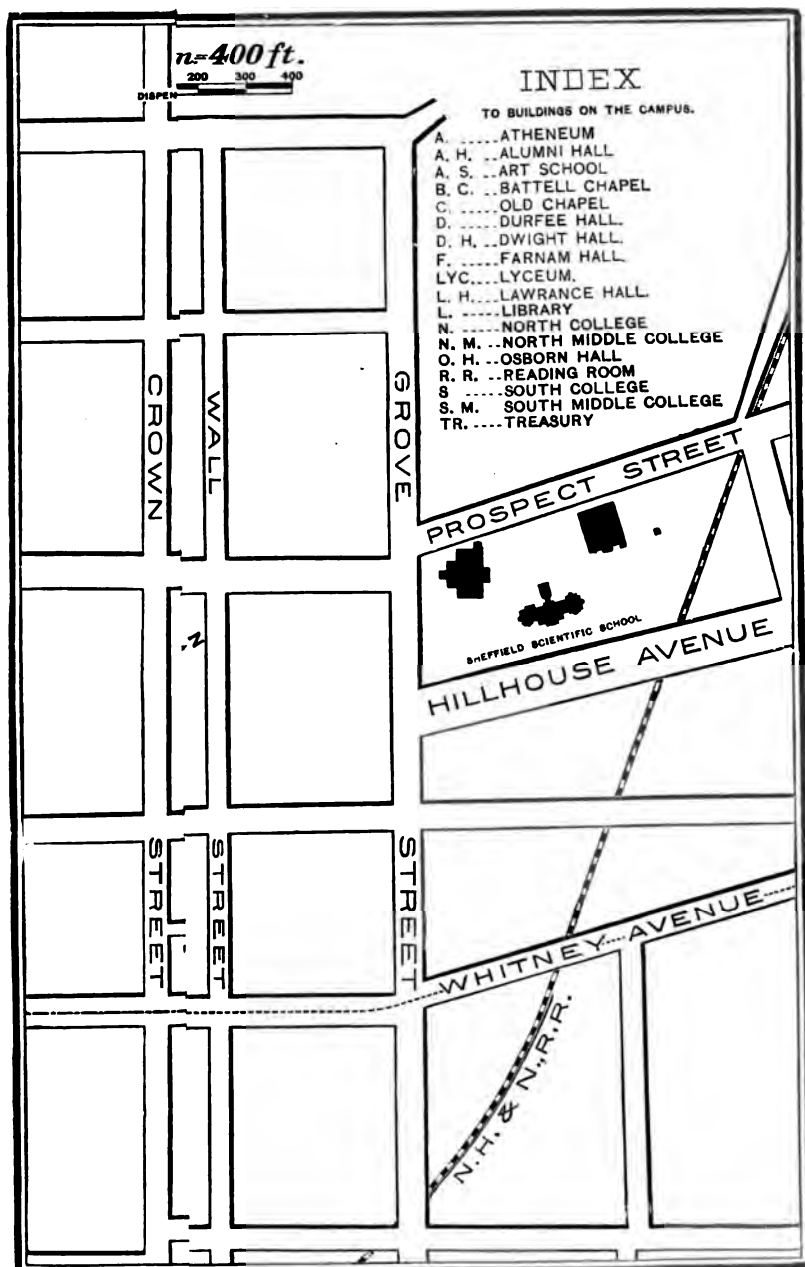


1889-90





UILDINGS.



CATALOGUE

OF

YALE UNIVERSITY

CXCth YEAR

1889-90



NEW HAVEN:
TUTTLE, MOREHOUSE & TAYLOR, PRINTERS
1889

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ABBREVIATIONS

A., Absent on leave; B., Sheffield Biological Laboratory; C., Old Chapel; D., Durfee Hall; E., East Divinity Hall; F., Farnam Hall; L., Lawrance Hall; LYC., Lyceum; N., North College; N. M., North Middle College; N. S. H., North Sheffield Hall; P., Peabody Museum; S., South College; S. H., Sheffield Hall; S. M., South Middle College; TR., Treasury Building; W., West Divinity Hall.

Upon the College Square, the rooms numbered from 1 to 32 are in South College; from 33 to 64 in South Middle College; from 65 to 96 in North Middle College; from 97 to 128 in North College; from 129 to 177 in Farnam Hall; from 178 to 185 in the Lyceum; from 186 to 200 in the Old Chapel; from 201 to 240 in Durfee Hall; from 241 to 282 in Lawrance Hall.

The rooms in East Divinity Hall are numbered from 1 to 54; in West Divinity Hall from 55 to 124.

The rooms in Sheffield Hall are numbered from 1 to 21; in North Sheffield Hall from 25 to 58; in the Sheffield Biological Laboratory from 60 to 79.

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THE SECRETARY'S office is in the Library, which is open every week-day during term-time, from 9.30 A. M. to 5 P. M. (or 4.30 P. M. during the winter months).

For Catalogues and general information, address THE SECRETARY OF YALE UNIVERSITY, NEW HAVEN, CONNECTICUT.

The Catalogue is published in December of each year, and is sold at twenty-five cents a copy,—or thirty cents if postage is included. Circulars of the various Departments are furnished without charge.

A list of the Graduates of the University (in Latin) is published triennially,—the last edition in June, 1889; a copy will be supplied to any graduate desiring it, on receipt of the postage (eight cents); copies may be obtained by other persons at cost price, fifty cents, with postage.

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CALENDAR

1889

19 Sept.	Thursday	FIRST COLLEGE TERM begins.
26 Sept.	Thursday	Fall Term, Law School, begins.
1 Oct.	Tuesday	School of the Fine Arts, term begins.
3 Oct.	Thursday	First Term, Medical School, begins.
18 Dec.	Wednesday	FIRST TERM ends.

Winter Vacation.

1890

7 Jan.	Tuesday	SECOND COLLEGE TERM begins.
9 Jan.	Thursday	Second Term, Medical School, begins.
9 Jan.	Thursday	Winter Term, Law School, begins.
27 March	Thursday	Junior Exhibition.
2 April	Wednesday	SPRING RECESS (in College) begins.
9 April	Wednesday	SPRING RECESS ends.
10 April	Thursday	Spring Term, Law School, begins.
1 May	Thursday	John A. Porter Prize Essays due.
6 May	Tuesday	Berkeley Scholarship Examination.
14 May	Wednesday	Anniversary of the Divinity School.
19 May	Monday	Woolsey Scholarship Examination begins.
19 May	Monday	Winthrop Prize Examination.
31 May	Saturday	School of the Fine Arts, term ends.
20 June	Friday	Presentation for Academical Degrees.
21 June	Saturday	DeForest Prize Speaking.
22 June	Sunday	Baccalaureate Sermon.
23 June	Monday	Anniversary of the Medical School.
23 June	Monday	Anniversary of the Sheffield Scientific School.
24 June	Tuesday	Anniversary Meeting of the Alumni.
24 June	Tuesday	Anniversary of the Law School.
25 June	Wednesday	COMMENCEMENT.
26 June	Thursday	Examinations for admission begin.

Summer Vacation.

16 Sept.	Tuesday	Examinations for admission begin.
18 Sept.	Thursday	FIRST COLLEGE TERM begins.
25 Sept.	Thursday	Fall Term, Law School, begins.
1 Oct.	Wednesday	School of the Fine Arts, term begins.
2 Oct.	Thursday	First Term, Medical School, begins.
17 Dec.	Wednesday	FIRST TERM ends.

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GOVERNMENT OF THE UNIVERSITY

The legal designation of the Corporation is "THE PRESIDENT AND FELLOWS OF YALE COLLEGE IN NEW HAVEN;" the powers of this body have been granted and confirmed in the following order.

THE COLLEGIATE SCHOOL OF CONNECTICUT, subsequently named YALE COLLEGE, and now commonly called YALE UNIVERSITY, was founded in the summer of the year 1701 by the combined action of a few of the ministers in Connecticut, who obtained in October of the same year a Charter from the Colony Legislature, which runs as follows:—

AN ACT FOR LIBERTY TO ERECT A COLLEGIATE SCHOOL.

WHEREAS several well disposed, and Publick spirited Persons of their sincere Regard to & Zeal for upholding & Propagating of the Christian Protestant Religion by a succession of Learned & Orthodox men have expressed by Petition their earnest desires that full Liberty and Priveledge be granted unto certain Undertakers for the founding, suitably endowing & ordering a Collegiate School within his Maj^{ty} Colony of Connecticut wherin Youth may be instructed in the Arts & Sciences who thorough the blessing of Almighty God may be fitted for Publick employment both in Church & Civil State. To the intent therefore that all due incouragement be Given to such Pious Resolutions and that so necessary & Religious an undertakeing may be sett forward, supported & well managed:—

BE IT ENACTED by the Govern^r & Company of the s^d Colony of Connecticut, in General Court now Assembled, And it is enacted & ordained by the Authority of the same that there be & hereby is full Liberty, Right and Priveledge Granted unto the Reverend M^r. James Noyes of Stonnington, M^r. Israel Chauncey of Stratford, M^r. Thomas Buckingham of Saybrook, M^r. Abraham Pierson of Kennelworth, M^r. Samuel Mather of Windsor, M^r. Samuel Andrew of Millford, M^r. Timothy Woodbridge of Hartford, M^r. James Pierpont of New Haven, M^r. Noadiah Russel of Middletown, M^r. Joseph Webb of Fairfield, being Rev^d Ministers of the Gospel & inhabitants within y^e s^d Colony,

proposed to stand as Trustees, Partners or Undertakers for the s^d School, to them and their successors, To EXERCISE, form, direct, order, establish, improve and att all times in all suitable wayes for the future to encourage the s^d School in such convenient place or Places, & in such form & manner & under such order & Rules as to them shall seem meet & most conducive to the afores^d end thereof, so as such Rules or Orders be not Repugnant to the Laws of the Civil Governm^t, as also to imploy the moneys or any other estate which shall be Granted by this Court or otherwise Contributed to that use according to their discretion for the benefit of the s^d Collegiate School from time to time & att all times henceforward.

And be it further ENACTED by the Authority afores^d that the before named Trustees, Partners or Undertakers together with such others as they shall associate to themselves (not exceeding the number of Eleven, or att any time being less than Seven, Provided also that Persons nominated or associated from time to time to fill up s^d number be ministers of the gospel inhabiting within this Colony & above the Age of forty years) or the major Part of them, the s^d Mr. James Noyes, [etc.] undertakers, & of such Persons so chosen & associated as aboves^d att any time hereafter, HAVE and shall have henceforward the oversight, full & compleat Right, Liberty, power & Priveledge to furnish, direct, manage, order, improve & encourage from time to time & in all times hereafter the s^d Collegiate School so Erected & formed by them in such ways, orders & manner & by such Persons, Rector or Master and officers appointed by them, as shall according to their best discretion be most conducible to attaine the afores^d mentioned end thereof.

It is also further Enacted by the Authority afores^d that the s^d Undertakers & Partners & their successors be & hereby are further impowered to have, accept, acquire, purchase or otherwise lawfully enter upon Any Lands, Tenements & Hereditam^{ts} to the use of the s^d School, not exceeding the value of five hundred Pounds p^r Anⁿ, & any Goods, Chattels, Sum or Sums of money whatsoever as have heretofore already been Granted, bestowed, bequeathed or given, or as from time to time shall be freely given, bequeathed, devised or settled by any Person or Persons whatsoever upon & to & for the use of y^e s^d School towards the founding, erecting or endowing the same, & to sue for, Recover & receiv all such Gifts, Legacies, bequests, annuities, Rents, issues & profits arising therefrom & to imploy the same accordingly, & out of y^e estate, Revenues, Rents, profits, inco^ms accruing & belonging to s^d School to support & pay as the s^d Undertakers shall agree & see cause, the s^d Rector or Master, Tutors, Ushers or other officers their Respective annual Salaries or Allowances. As also for the encouragem^t of the Students to grant degrees or Licences as they or those deputed by them shall see cause to order & appoint.

Under this Charter the Collegiate School was begun at Saybrook, in November, 1701, where it continued until its removal to New Haven, in October, 1716. In September, 1718, the name of YALE COLLEGE was given by the Trustees to the School, in honor of the benefactions of ELIHU YALE, of London, lately Governor of the East India Company's settlement at Madras.

In 1723 an "ACT IN EXPLANATION OF AND ADDITION TO THE ACT FOR ERECTING A COLLEGIATE SCHOOL" was passed by the General Assembly, with the following provisions:—

WHEREAS Pursuant to the Powers and Privileges granted to Certain Trustees for Erecting a Collegiate School in this Colony Entitled an Act for a Collegiate School, the Said Trustees have Erected the Said School in the Town of New-Haven which School is now known by the Name of Yale Colledge; And Whereas it appears to this Assembly that an Explanation and Enlargement of the powers and privileges granted by Said Act is Necessary for the Carrying on the Affairs of the Said Colledge, for want of which it has Laboured under great difficulties very much to the prevention of that Order and good Education which is to be desired there:

Bee it therefore Enacted by the Governour, Council and Representatives in Generall Court assembled and by the Authority of the Same that the Said Act which provides that the Number of the Said Trustees be not under Seven nor above Eleven is not to be Understood or Taken so as to be restrictive of the power of the Said Trustees Never to Choose any person to be a Trustee, when there is of Such persons as have been Chosen and Acted as Trustees Eleven persons Living in the Colony or Elsewhere, but that in Case any person so Chosen be by Providence Incapacitated from attending that Service or shall himself decline the Same thro' the Necessity of his own Affairs or for any other such Reason as he shall Judge requisite, the Trustees in any of their Meetings Lawfully Called may be Understood to have and it is hereby Enacted and declared that they shall be Taken to have full power by the Majority of Such Meeting to proceed to the Choice of Another Trustee in the Room of any such person. And it is hereby further declared and Enacted to be the True Intent and Meaning of the Act afores^d that the said Trustees shall be Impowered and they are hereby declared to have power to Meet Together for Considering, Advising about and Resolving upon all Matters belonging to the Trust of the Said Colledge committed unto them as afores^d and to Agree and Conclude, Order and determine Concerning them by the Majority of the

Said Meeting, and by the same Majority to Choose and Appoint a Clerk who shall, in a fair book prepared for that End, Register and Carefully preserve the Acts of all such Meetings.

And WHEREAS it has been doubted what Number of the Said Trustees may be Lookt upon as a Sufficient or full Meeting, Inasmuch as there is not in the afores^d Act any Express mention made of any Meeting of the said Trustees ; It is therefore to prevent all Scruple of that kind for the future hereby provided and declared that due Notice being given to the Trustees by Consent of any three of them of a Meeting of the Trustees desired at any Time or place, any Seven or more of the Trustees present at such Time and place shall be Esteemed a full Meeting. And it is hereby declared and Enacted that in all such Meetings, so Called, or Otherwise as the said Trustees in any such Meeting shall agree, all affairs under the Care of the said Trustees shall be determined by the Majority of such Meeting.

And WHEREAS it has been found Inconvenient that in the Election of Persons to be Trustees, the Trustees Election by the afores^d Act should be Limited and restrained so as that the Person who shall be Chosen must Necessarily be forty Years of age ; It is hereby declared and Enacted that for the future the said Trustees in any Election of a person into that Trust shall not be Esteemed or held Obligated by said Act to Choose such a person as shall be above forty Years of Age, but may Choose such a person otherwise Qualifyed According to said Act, Provided he is thirty Years of Age. And it is further hereby Allowed, Enacted, Granted and Provided that whosoever shall be Chosen and made a Rector of the said Colledge shall by Virtue thereof become a Trustee of the same and be so Esteemed and Taken during his Continuance in the said Rectorship.

In 1745 a thoroughly revised Charter was granted by the Assembly ; the provisions of permanent interest are as follows :—

An ACT for the more full and complete Establishment of YALE COLLEGE in NEW HAVEN, and for enlarging the powers and Privileges thereof.

WHEREAS upon the Petition of several well disposed and public-spirited Persons expressing their desire that full Liberty and Privilege might be granted unto Certain Undertakers for the founding, suitably endowing and ordering a *Collegiate School*, within this Colony, wherein Youth might be instructed in the Arts and Sciences, the Governor and Company of the said Colony in General Court assembled at *New Haven*, on the Ninth Day of October, in the Year of our Lord

1701, Granted unto the Rev'd Messrs. *James Noyes* [etc.], who were proposed to stand as Trustees, Partners or Undertakers for the Society, and to their Successors, full Liberty, Right and Privilege to erect, form, direct, order, establish, improve, and at all Times in all suitable Ways to encourage the said School in some convenient Place in this Colony, and granted sundry Powers and Privileges for the attaining the End aforesaid;

And Whereas the said Trustees, Partners or Undertakers in pursuance of the aforesaid Grant, Liberty and License, founded a *Collegiate School* at *New Haven*, known by the Name of *YALE COLLEGE*, which has received the favorable Benefactions of many liberal and piously disposed Persons, and under the Blessing of Almighty God has trained up many worthy Persons for the Service of God in the State as well as in the Church;

And Whereas the General Court of this Colony assembled at *New Haven*, the Tenth Day of October, in the Year of our Lord 1723, did explain and enlarge the aforesaid Powers and Privileges granted to the aforesaid Partners, Trustees or Undertakers and their Successors, for the Purpose aforesaid; as by the respective Acts, reference thereto being had, more fully and at large may appear;

And Whereas the Rev'd Messrs. *Thomas Clap*, *Samuel Whitman*, *Jared Eliot*, *Ebenezer Williams*, *Jonathan Marsh*, *Samuel Cooke*, *Samuel Whittelsey*, *Joseph Noyes*, *Anthony Stoddard*, *Benjamin Lord*, and *Daniel Wadsworth*, the present Trustees, Partners and Undertakers of the said School, and Successors of those beforementioned, have petitioned, that the said School, with all the Rights, Powers, Privileges and Interests thereof, may be confirmed, and that such other additional Powers and Privileges may be granted as shall be necessary for the Ordering and Managing the said School in the most advantageous and beneficial Manner for the promoting all good Literature in the present and succeeding Generations:

Therefore,

THE GOVERNOR and COMPANY of his Majesty's said English Colony of *Connecticut* in General Court assembled, this Ninth Day of *May*, in the Year of our Lord 1745, enact, ordain, and declare, and by these Presents it is enacted, ordained and declared—

That the said *Thomas Clap* [etc.], shall be an *Incorporate Society* or *Body Corporate and Politic*, and shall hereafter be called and known by the name of THE PRESIDENT AND FELLOWS OF *YALE COLLEGE* IN *NEW HAVEN*, and that by the same Name they and their Successors shall and may have perpetual Succession, and shall and may be Persons in the Law capable to plead and be impleaded, defend and be defended, and answer and be answered unto; and also to have, take, possess, acquire, purchase or otherwise receive Lands, Tenements, Hereditaments, Goods, Chattels, or other Estates, and the same Lands, Tenements

Hereditaments, Goods, Chattels or other Estates to grant, demise, lease, use, manage or improve for the Good and Benefit of the said *College*, according to the Tenor of the Donation, and their Discretion.

That all Gifts, Grants, Bequests, and Donations of Lands, Tenements, or Hereditaments, of Goods and Chattels heretofore made to or for the Use, Benefit and Advantage of the *Collegiate School* aforesaid, whether the same be expressed to be made to the President or Rector, and to the rest of the Incorporate Society of *Yale College*, or to the Trustees or Undertakers of the *Collegiate School* in *New Haven*, or to the Trustees by any other Name, Style or Title whatsoever, whereby it may be clearly known and understood that the true Intent and Design of such Gifts, Grants, Bequests and Donations, was to or for the Use, Benefit and Advantage of the Collegiate School aforesaid, and to be under the Care and Disposal of the Governors thereof, shall be confirmed, and the same hereby are confirmed, and shall be and remain to, and be vested in the President and Fellows of the *College* aforesaid, and their Successors, as to the true and lawful Successors of the original Grantees.

That the said PRESIDENT AND FELLOWS and their Successors shall and may hereafter have a common Seal, to serve and use for all Causes, Matters and Affairs of them and their Successors, and the same Seal to alter, break and make new as they shall think fit.

That the said THOMAS CLAP shall be, and he is hereby established the present PRESIDENT, and the said *Samuel Whitman*, [etc.] shall be, and they are hereby established the present FELLOWS of the said *College*, and that they and their Successors shall continue in their respective Places during Life, or until they or either of them shall resign, or be removed, or displaced, as in this Act is hereafter expressed.

That there shall be a General Meeting of the *President and Fellows* of said *College*, in the College Library on the second Wednesday of September annually, or at any other Time and Place which they shall see Cause to appoint, to consult, advise and act in and about the Affairs and Business of the said *College*; and that on any special Emergency, the President and two of the Fellows, or any four of the Fellows, may appoint a Meeting of the said *College*, provided they give Notice thereof to the Rest by Letters sent and Left with them, or at the Places of their respective Abode, five Days before such Meeting; and that the President and six Fellows, or in Case of the Death, Absence, or Incapacity of the President, seven Fellows, convened as aforesaid (in which Case the eldest Fellow shall preside), shall be deemed a Meeting of the President and Fellows of said *College*, and that in all the said Meetings, the Major Vote of the Members present shall be deemed the Act of the Whole, and where an Equivote happens, the President shall have a casting Vote.

That the President and Fellows of the said *College* and their Successors, in any of their Meetings assembled as aforesaid, shall and may

from Time to Time, as Occasion shall require, elect and appoint a President or Fellow in the Room and Place of any President or Fellow who shall die, resign, or be removed from his Office, Place or Trust (whom the said Governor and Company hereby declare, for any Misdemeanor, Unfaithfulness, Default or Incapacity, shall be removable by the President and Fellows of the said College; Six of them, at least, concurring in such Act); and shall have Power to appoint a Scribe or Register, a Treasurer, Tutors, Professors, Steward and all such other Officers and Servants, usually appointed in Colleges or Universities, as they shall find necessary and think fit to appoint for the promoting good Literature, and the well ordering and managing the Affairs of said College; and them or any of them, at their Discretion, to remove; and to prescribe and administer such Forms of Oaths (not being contrary to the Laws of England or of this Colony) as they shall think proper, to be administered to all the Officers and Instructors of the said College, or to such and so many of them as they shall think proper, for the faithful Execution of their respective Places, Offices and Trusts.

That the President and Fellows shall have the Government, Care and Management of the said College and all the Matters and Affairs thereunto belonging, and shall have Power from Time to Time, as Occasion shall require, to make, ordain and establish all such wholesome and reasonable Laws, Rules and Ordinances, not repugnant to the Laws of England, nor the Laws of this Colony, as they shall think fit and proper for the Instruction and Education of the Students, and Ordering, Governing, Ruling and Managing the said College, and all Matters, Affairs, and Things thereunto belonging, and the same to Repeal and alter as they shall think fit.

That the President of said College, with the Consent of the Fellows, shall have Power to give and confer all such Honors, Degrees or Licenses as are usually given in Colleges or Universities, upon such as they shall think worthy thereof.

In 1792 a grant of money from the State of Connecticut was received, upon the condition that certain State officials should become members of the board of Fellows, as below expressed :—

In case this grant shall be accepted, in manner as hereinafter provided, the Governor, Lieutenant Governor, and six senior assistants in the Council* of this State, for the time being, shall ever hereafter, by virtue of their said offices, be trustees or fellows of said college; and shall together with the present President and Fellows of said College, and their successors, constitute one corporation, by the name and style

* Changed in 1819 to the six senior senators.

mentioned in the charter of said College; and shall have and enjoy the same powers, privileges, and authority, in as full and ample a manner, as though they had been expressly named and included in said charter; And that in case of vacancy, by the death, or resignation, or in any other way, of any of the present Fellows of said College, and their successors, every such vacancy shall forever hereafter be supplied by them, and their successors, by election, in the same manner as though this act had never passed.

In the new Constitution of the State, adopted in 1818, the privileges conferred by the Charter were reaffirmed, as follows :—

ARTICLE VIII, SECT. I.

The charter of Yale College, as modified by agreement with the Corporation thereof, in pursuance of an Act of the General Assembly, passed in May, 1792, is hereby confirmed.

In 1872, at the request of the Corporation, an Act was passed by the General Assembly, providing (as follows) for the substitution of graduates in the place of the six senators among the Fellows :—

SECTION 1.—All graduates of the first degree, of five or more years' standing, in any of the departments of Yale College, and all persons who have been admitted to any degree higher than the first in Yale College, whether honorary or in course, may, on the day next preceding the public commencement day of said College, in the year of our Lord 1872, cast their votes, under such regulations as the President and Fellows may prescribe, for six persons to be chosen from among such graduates; and the six persons who shall be found to be elected by a plurality of the votes cast, shall be the Fellows of Yale College in the stead of the six senior senators of the State, and shall have all the rights, duties, and privileges as Fellows which are now by law conferred upon said senators. In case of an equality of votes between two or more candidates, the person who shall hold the said office of Fellow shall be designated by lot from among the persons receiving such equality of votes.

SECTION 2.—The Fellows thus elected shall enroll themselves by lot in six classes, one holding the office for six years, another for five years, another for four years, another for three years, another for two years, and another for one year, eligible for re-election; and every year as a vacancy occurs, all graduates of the first degree, of five or more years' standing

in any of the departments of Yale College, and all persons who have been admitted to any degree higher than the first in Yale College, whether honorary or in course, may, upon the day next preceding commencement day, in the manner heretofore prescribed, elect by a plurality of votes a person to fill the vacancy, and hold the office of Fellow for a period of six years, eligible for re-election ; and so whenever a vacancy shall occur from death, resignation, or any other cause, such graduates may elect a person at the next commencement to fill the office of Fellow for the remainder of the term in which a vacancy has occurred. The official year of such Fellows shall end with the day next preceding each commencement day.

In January, 1887, an Act passed the General Assembly of the State, authorizing the use of the title "Yale University" by the President and Fellows of Yale College, and providing that gifts to, contracts with, conveyances to or by, and other acts affecting said Corporation by either of the names specified shall be valid.

DEPARTMENTS OF INSTRUCTION

The courses of study offered in the University are comprehended in four Departments, under the control of the Corporation, each Department being also under the administration of a distinct Faculty of instruction. The Departments are as follows :—

THE DEPARTMENT OF PHILOSOPHY AND THE ARTS ;
THE DEPARTMENT OF THEOLOGY ;
THE DEPARTMENT OF MEDICINE ;
THE DEPARTMENT OF LAW.

Under the first-named Department are included two separately organized sections in which instruction for undergraduates is provided, viz :—

THE ACADEMICAL DEPARTMENT, and
THE SHEFFIELD SCIENTIFIC SCHOOL ;

also, THE SCHOOL OF THE FINE ARTS, with a special organization ; and The Courses for GRADUATE INSTRUCTION, under the combined Faculty of the Department.

It is to be understood that the courses of instruction above described are open to persons of the male sex only, except when both sexes are specifically included.

The LIBRARY, the PEABODY MUSEUM OF NATURAL HISTORY, and the OBSERVATORY are severally organized independently of the special Departments, and are designed to contribute, in their appropriate spheres, to the instruction and advancement of the whole institution.

ACADEMICAL DEPARTMENT (YALE COLLEGE)

FACULTY

REV. TIMOTHY DWIGHT, D.D., LL.D., PRESIDENT
REV. NOAH PORTER, D.D., LL.D., *Professor of Moral Philosophy and Metaphysics*
JAMES D. DANA, PH.D., LL.D., *Professor of Geology and Mineralogy*
EDWARD J. PHELPS, LL.D., *Professor of Law*
HUBERT A. NEWTON, LL.D., *Professor of Mathematics*
ARTHUR M. WHEELER, M.A., *Professor of History*
J. WILLARD GIBBS, PH.D., *Professor of Mathematical Physics*
ARTHUR W. WRIGHT, PH.D., *Professor of Experimental Physics*
EUGENE L. RICHARDS, M.A., *Assistant Professor of Mathematics*
WILLIAM I. KNAPP, PH.D., LL.D., *Professor of Modern Languages*
FRANKLIN B. DEXTER, M.A., *Registrar*
TRACY PECK, M.A., *Professor of Latin*
REV. CORNELIUS L. KITCHEL, M.A., *Instructor in Greek*
WILLIAM G. SUMNER, LL.D., *Professor of Political and Social Science*
REV. GEORGE T. LADD, D.D., *Professor of Mental and Moral Philosophy*
HENRY P. WRIGHT, PH.D., *Professor of Latin, and Dean*
HENRY A. BEERS, M.A., *Professor of English Literature*
EDWARD S. DANA, PH.D., *Assistant Professor of Natural Philosophy*
THOMAS D. SEYMOUR, M.A., *Professor of Greek*
WILLIAM R. HARPER, PH.D., *Professor of Biblical Literature*
FRANK A. GOOCH, PH.D., *Professor of Chemistry*
ALBERT S. COOK, PH.D., LL.D., *Professor of English*
WILLIAM BEEBE, B.A., *Assistant Professor of Mathematics and Astronomy*
ANDREW W. PHILLIPS, PH.D., *Assistant Professor of Mathematics*
GEORGE B. ADAMS, PH.D., *Professor of American History*
WILLIAM T. STRONG, M.A., *Instructor in German*
THOMAS D. GOODELL, PH.D., *Assistant Professor of Greek*
EUGÈNE BERGERON, *Instructor in French*
HORATIO M. REYNOLDS, B.A., *Assistant Professor of Greek*
FRANK P. GOODRICH, B.A., *Instructor in German*

GEORGE M. DUNCAN, M.A., *Instructor in Mental and Moral Philosophy*
EDWARD T. McLAUGHLIN, B.A., *Tutor in English*
HORACE D. TAFT, B.A., *Tutor in Latin*
GUSTAVE F. GRUENER, B.A., *Tutor in German*
FRANK G. MOORE, B.A., *Tutor in Latin*
JUDSON S. DUTCHER, B.A., *Tutor in Mathematics*
CHARLES A. MOORE, B.A., *Tutor in Latin*
CARLETON L. BROWNSON, B.A., *Instructor in Latin*

OTHER INSTRUCTORS

WILLIAM D. WHITNEY, PH.D., LL.D., *Professor of Comparative Philology
and Sanskrit*
MARK BAILEY, M.A., *Instructor in Elocution*
DANIEL C. EATON, M.A., *Professor of Botany*
SIDNEY I. SMITH, M.A., *Professor of Comparative Anatomy*
RUSSELL H. CHITTENDEN, PH.D., *Professor of Physiological Chemistry*
ARTHUR T. HADLEY, M.A., *Professor of Political Science*
JAY W. SEAVER, M.D., *Instructor in Gymnastics and Practical Hygiene*
EDWARD V. RAYNOLDS, D.C.L., *Instructor in Municipal Law*

From the date of the original Charter, in 1701, a course of instruction leading to the degree of Bachelor of Arts has been continuously offered at the College ; at first only three years of undergraduate study were required, but before 1710, a four years' course was provided, which has been since maintained.

Until 1813, when a Medical School was organized, no other course of study for a degree was marked out at Yale College ; but with the incorporation of the Medical Institution (as it was originally styled) the older Department began to be designated the Academical Institution (or Department), and has continued to be so designated until at length, with the growth of other Schools about it and the expansion of the whole into Yale University, the original title of Yale College has again come to be applied distinctively to this Department.

TERMS OF ADMISSION

ALL CANDIDATES FOR ADMISSION to the Freshman Class are examined in the following books and subjects; certificates of standing elsewhere are not accepted in place of this examination:—

1. Latin Grammar.
 2. Caesar—Gallic War, books i-iv.
 3. Cicero—Orations against Catiline and for Archias, and, in addition, either the Marcellus and the 14th Philippic, or the Milo, or the Manilian Law, or the Cato Major.
 4. Vergil—Bucolics, and first six books of the Aeneid, including Prosody.
 5. Ovid—Metamorphoses, translation at sight.
 6. The translation, at sight, into simple and idiomatic English, of passages from prose Latin.
 7. The translation into Latin of connected passages of English prose. [As special importance is given to this part of the examination, it is suggested to teachers that they connect exercises in making Latin, both oral and written, with all the Latin studies of the preparatory course.]
 8. Roman History, to the death of Augustus.
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9. Greek Grammar.
 10. Xenophon—Anabasis, four books.
 11. Homer—Iliad, three books, with Prosody.
 12. The translation, at sight, into simple and idiomatic English, of a passage from some work of Xenophon.
 13. The translation of English into Greek: Jones's Exercises, White's Lessons, and Keep's Lessons are suggested, as indicating the preparation required.
 14. Greek History.
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15. Higher Arithmetic—including the metric system of weights and measures.
 16. Algebra—so much as is included in Loomis's Treatise, up to the chapter on Logarithms.
 17. Plane Geometry.
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18. French or German—so far as to translate at sight easy prose, the candidate being at liberty to decide for himself in which of the two languages he shall be examined.

Candidates are allowed to divide the examination, with an interval of not less than a year between the two parts. In such cases, they must present themselves at one of the two regular examinations, that is, either in June or in September, of the first year; and at this preliminary examination each candidate must submit a definite statement from his principal instructor of the subjects which he is authorized to offer. No candidate will be allowed to offer French, German, Geometry, the translation at sight of prose Latin, or of prose Greek, at a preliminary examination; and at the close of such an examination, no certificate of partial admission will be furnished, unless at least six subjects have been satisfactorily passed.

THE REGULAR EXAMINATION FOR ADMISSION to College is held at Alumni Hall, New Haven, on Thursday, Friday, and Saturday after Commencement (June 26, 27, 28, 1890); *attendance is required at the opening of the examination, at 9 A. M. on Thursday*, and the sessions will close at noon on Saturday. The examination is wholly in writing; a set of papers recently given will be sent by the Registrar on application.

In 1890 examinations (beginning on Thursday, June 26, at 9 A. M., and closing Saturday noon) for admission to the Freshman Class (but not to higher classes) will also be held in Exeter, N. H., Andover, Mass., New York City, Albany, Chicago, Cincinnati, and San Francisco, at places to be announced in the local newspapers of the day previous. Candidates who propose to be present elsewhere than at New Haven are requested to send their names to the Registrar before June 15. A fee of five dollars (payable at the opening of the sessions) is charged for admission to examinations outside of New Haven. The College is also prepared to hold an examination, at the above named time, in any city or at any school where the number of candidates and the distance from other places of examination may warrant it; applications for this purpose must be sent to the Registrar before May 15.

A second examination is held in New Haven at the

beginning of the College year, on Tuesday and Wednesday (September 16, 17, 1890); candidates for this examination must be present at Alumni Hall at 9 A. M. on Tuesday.

Persons applying for admission to any of the classes in College during the course of the College year (that is, from September to June) must first obtain from the Faculty permission to be examined, and pay to the Treasurer a fee of ten dollars.

In general, examinations for admission to the next Freshman Class can be held only in June and September as specified; if in any case sufficient reason exists for an exception to this rule, a special fee (not exceeding fifty dollars) will be charged.

ADVANCED STANDING—All candidates for advanced standing, *whether from other Colleges or not*, are examined, in addition to the preparatory studies, in those studies already pursued (see pp. 34 ff.) by the class which they wish to enter. In the several languages, for the particular books studied by the class equivalent amounts from other books may be offered. Certificates of standing elsewhere cannot be accepted in place of these examinations, although they may be taken into account as collateral evidence of fitness for admission.

Bachelors of Arts or of Philosophy of any institution may join the Senior Class (without examination and without becoming candidates for the Bachelor's degree), as candidates for the degree of Doctor of Philosophy after three years' study.

No one can be admitted to the Senior Class after the beginning of the second term.

AGE—No one can be admitted to the Freshman Class till he has completed his fifteenth year, nor to an advanced standing without a corresponding increase of age.

TESTIMONIALS—Satisfactory testimonials of good moral character (preferably from the last principal instructor) are in all cases required, before a certificate of admission in full can be granted. Students from other Colleges must present certificates of dismissal in good standing.

BOND—Every person must give to the Treasurer, on being admitted, a bond, executed by his parent or guardian, for five hundred dollars, as security for the payment of charges arising under the laws of the College. A blank form for this purpose will be furnished at the time of admission.

GOVERNMENT AND INSTRUCTION

The Dean has the general supervision under the Faculty of the Senior and Junior Classes; the members of the two lower classes are assigned by divisions for a similar supervision to the care of the several instructors in those Classes. Absence from College exercises will be excused only for extremely urgent reasons. In general, a student cannot be excused for absence at the beginning or near the end of a term.

In order to cover all cases of absence which may seem justifiable to the student, but for which no excuses will be accepted, an allowance is granted to a member of the Senior or Junior Class of absence from eight class-room exercises (recitations, lectures, or rhetorical appointments), and to a member of the Sophomore or Freshman Class from six class-room exercises, during the first term and during each half of the second term, without incurring marks and without affecting his record for scholarship; provided that these absences shall not immediately precede or follow a vacation or recess; provided, also, that no two absences shall be consecutive in any one study, and that such absences shall not excuse the student from preparation upon the omitted lessons when reviewed.

The members of each of the three lower classes are arranged at the beginning of each term in divisions according to scholarship. During the present year, for required work the Senior Class is divided into three divisions, the Junior Class into four, the Sophomore Class and the Freshman Class each into six divisions; in the elective courses, the divisions are of convenient size for class-room work.

Greek, Latin, Mathematics, and English, occupy thirteen hours of class-room work per week in the first term of Freshman year, and twelve hours per week during the rest of Freshman year and during Sophomore year. Three hours of class-room work per week during the Freshman and the Sophomore years are given to Modern Languages.

If a student can pass a satisfactory examination in any of the prescribed studies for the work of one year in advance, he may be allowed to choose from the list of Electives (see p. 37) some other course which he is qualified to pursue with advantage, covering the same number of hours.

In the Freshman and Sophomore years all the work is *prescribed*. The kind and amount of study in these two years are believed to be such as are essential for laying the foundation of a liberal education, whatever the department or profession that may be pursued in after-life; and no more than is needed to give the student a proper basis of knowledge and discipline for the study of the *elective* courses which follow, and that knowledge of himself, and of the subjects before him which is needed for a judicious choice. The basis is necessarily a broad one. The only prominent departments not now in this foundation, either in the preparatory or college work, though pursued in the later elective courses, are those of the Natural Sciences and Chemistry. As some knowledge of these departments, of their methods of reasoning, of the use of the words "species" and "genus," and some idea of the system of nature, are essential to the student of almost any branch of philosophy, as well as to those who may take the elective courses in these sciences, it is recommended that the student should include the study of the elements of some departments of the Natural Sciences, and of Chemistry, in his preparation for College.

Of the work of the Junior year three-fifths and of that of the Senior year four-fifths are in elective courses. The whole number of elective studies open to the two classes is at the present time ninety-nine; and in addition there are several

courses of lectures, attendance on which is optional. The Juniors have open to them elective studies in the English Language and Literature, History, Political Science, and the Natural Sciences, in addition to those in the departments of the Classics, the Modern Languages, and Mathematics; and the Seniors, electives under all these departments, along with others of higher range as particularly explained below.

Many of the courses fall naturally into groups: as that of the Ancient Languages and Linguistics; Psychology, Logic, and Philosophy, with Ethics; Political Science and Law; History; Modern Languages and Literature; Mathematics and Physics; Chemistry and the Natural Sciences; and the student is recommended to select his courses as far as possible according to his needs, in part perhaps according to his expectations as to future work, fixing first upon the chief subject, and selecting others that are subsidiary to it. In several cases, related courses are accessible to the student only as they are taken consecutively.

To promote the rational choice of elective courses, SPECIAL HONORS in the various groups of studies are offered, to be given at the end of the Senior year, in accordance with the scheme on page 59.

THE PROGRAM OF STUDIES for the current year is as follows:

FRESHMAN YEAR:

Greek—Homer's *Iliad* (two books); Homer's *Odyssey* (four books); Xenophon's *Memorabilia* (50 pp.); Herodotus (50 pp.); the *Philippics* and *Olynthiacs* of Demosthenes (80 pp.); Prose Composition. (Students especially proficient in Greek will be assigned to an advanced section.)

Latin—Livy, Book *xxi*; Cicero's *De Amicitia* and *Selected Letters*; *Satires of Horace*; Prose Composition; History of the Roman Republic.

French or German—Three hours a week throughout the year. Students may at their option either continue the study of the modern language presented for admission to college, or begin the study of German in case they have not previously pursued it. Those who have sufficient

knowledge of either language will be assigned to classes still further advanced.

Mathematics—In *Geometry*: Planes, Polyhedrons, Cones, Cylinders, and Spheres. Projection of figures with exercises on Models. Text-book, Chauvenet's *Geometry*.

Plane Trigonometry: Solution of Triangles, Mensuration and Surveying. Text-book, Richards's *Trigonometry*. *Trigonometric Analysis*. Text-book, Case's *Elementary Treatise*.

Algebra: The Geometrical interpretation of the Theory of Equations, Imaginaries, and the Solution of Higher Equations. Text-book Phillips & Beebe's *Graphic Algebra*.

SOPHOMORE YEAR:

Greek—The *Agamemnon* of Aeschylus with a special division; the *Antigone* and *Oedipus Tyrannus* of Sophocles; the *Alcestis* of Euripides; Selections from the Lyric Poets; First Book of *Thucydides* (45 pp.); Plato's *Protagoras*; the *Philippics* and First and Third *Olynthiacs* of Demosthenes.

Latin—Cicero's *Brutus*; Agricola and Germania of Tacitus; Odes and Epodes of Horace; *Menaechmi* of Plautus; *Andria* and *Adelphi* of Terence; Sight-reading.

Modern Languages—Advanced French, or advanced German, at the option of the student, three hours a week throughout the year. Those who so desire may begin the study of German, in case they have never pursued it.

Mathematics—Trigonometry: Spherical Trigonometry; Applications to Navigation and Astronomy. Text-book, Richards's *Trigonometry*.

Analytical Geometry: Plane and Solid, with Applications to Map-Projection. Text-book, Loomis's *Analytical Geometry*.

Mechanics—The elementary principles of Kinematics, Kinetics (or Dynamics), and Statics, in reference to solid bodies, with practical applications. Text-book, Dana's *Mechanics*.

English—In the first term, for the lower scholarship divisions, Rhetoric, associated with essays, mainly by writers of the present century. For the first division, Burke, Hudson's *Selections*, Part i; De Quincey's *Mail Coach*; Macaulay's *Essay on Johnson*; Ruskin's *Sesame and Lillies*; Matthew Arnold's *On Translating Homer* and *Celtic Literature* (in part); with a course of outside reading. Special attention is given to rhetorical analysis.

Compositions—Compositions, through the whole year: both extended essays and class-room exercises in extempore writing. Private criticism of each student's work, together with rhetorical discussions before small groups.

JUNIOR AND SENIOR YEARS:

The *prescribed* courses of Junior year occupy six hours per week, and those of Senior year three hours per week. In addition, each member of the Junior class is required to select nine hours per week, and each member of the Senior class twelve hours per week, from the list of *elective* courses.

PRESCRIBED STUDIES OF JUNIOR YEAR:

Physics—Ganot's *Physics*: during the first term the subjects of Liquids, Gases, Sound, and Light, and part of the subject of Heat, with experimental illustrations in the class-room; during the second term, Heat, continued, followed by Electricity and Magnetism, with weekly experimental lectures on these three subjects.

Astronomy—Loomis's *Treatise on Astronomy*.

Logic—Jevons's *Lessons in Logic*; Fowler's *Inductive Logic*; exercises in the criticism of arguments; lectures.

Psychology—Porter's *Elements of Intellectual Science*, Introduction, First and Second Parts; Lotze's *Outlines of Psychology*; lectures.

PRESCRIBED STUDIES OF SENIOR YEAR:

Psychology—Porter's *Elements of Intellectual Science*, Third and Fourth Parts; Lotze's *Outlines of Psychology*; lectures.

Ethics—Porter's *Elements of Moral Science*.

Theism, and the Evidences of Christianity—Lectures.

RHETORIC AND ELOCUTION:

Rhetoric—English Composition. Four or five themes a year are required from each member of the Senior, Junior, and Sophomore classes; these themes are read and corrected by the instructors in Rhetoric. For premiums in this department see pp. 70, 71.

Elocution—Sophomore Year: Lectures on the Science and Art of Elocution,—logical analysis,—vocal analysis, expression, and culture,—oratorical action. Practice in speaking and recitation by sub-divisions. Individual instruction and private drill in preparation for speaking before the Professor of Rhetoric for the "Prizes for Declamation."

Junior Year: Three weeks of preparatory training for the speakers at the Junior Exhibition.

Senior Year: Three weeks of preparatory training for the speakers at Commencement.

ELECTIVE COURSES

Juniors select nine hours per week, and Seniors twelve hours per week, from the following list. All the courses are open to members of either class, unless some limitation is specified. The number of hours specified means, in every case, hours per week. When a course is stated as occupying "both terms," it cannot, if chosen, be abandoned during the year.

I. MENTAL AND MORAL SCIENCE

Ex-President PORTER :—

- 1 *Ethics and Philosophy.* [Seniors] 2 hrs. both terms.

Critical analyses of the principal ethical theories, and constant use of Sidgwick's History of Ethics, Martineau's Types of Ethical Theory, Abbot's Kantian Ethics, Porter's Ethics, Laurie's Ethics, Spencer's Data of Ethics, Leslie Stephen's System of Ethics, Green's Prolegomena to Ethics.

Professor LADD :—

- 2 *Physiological Psychology.* 2 hrs. both terms.

A study (illustrated by charts, models, and histological preparations) of the human nervous mechanism, of the principal relations which exist between changes in this mechanism and the activities of the mind, and a discussion of the conclusions which may be drawn from these relations respecting the nature and laws of the mind. Ladd's Elements of Physiological Psychology.

- 3 *Philosophical Anthropology.* [Seniors.] 2 hrs. both terms.

Man, as body and mind, in his relations to the world, to his fellows, and to God, and in his historical development,—from the modern scientific and philosophical points of view. Lotze's Microcosmus; discussions and lectures.

- 4 *Philosophy.* [Seniors.] 2 hrs. both terms.

The reading, with lectures, and papers and discussions by the class, of Hartmann's Philosophy of the Unconscious, and Janet's Final Causes.

Mr. DUNCAN :—

- 5 *Logic.* [Seniors.] 1 hr. both terms.

This course is in Mansel's Prolegomena Logica and Jevons's Principles of Science, and is designed to supplement the study of Logic in Junior year.

6 *History of Philosophy.* [Seniors.] 2 hrs. both terms.

An elementary study of the development of speculative thought from Descartes to the present time, with cursory reading of philosophical masterpieces from Descartes to Kant (Descartes' Method and Principles of Philosophy, pt. i; Bacon's *Novum Organum*; Spinoza's *Ethics*—selections; Locke's *Essay on Human Understanding*—selections; Leibnitz's *Monadology* and *Philosophical Opuscles*; Berkeley's *Principles of Human Knowledge*; Hume's *Inquiry concerning Human Knowledge*; Kant's *Prolegomena*).

II. POLITICAL SCIENCE AND LAW

Professor SUMNER :—

7 *Political Economy.* 2 hrs. both terms.

The elements of Political Economy, and the recent financial history of the United States. This course is planned as a two years' course, although it may be dropped at the end of the first year. It should be taken by Juniors who intend to give especial attention to this subject, as it is introductory to all the Senior courses in this department.

7 a *Political Economy.* 3 hrs. both terms

Includes course 7, with an additional hour per week in special topics; planned especially for Seniors whose chief interest lies in other departments, and who want only one course in Political Economy.

(Courses 8, 9, and 10 are open only to those who have taken one course in Political Economy.)

8 *Political Economy.* [Seniors.] 2 hrs. both terms.

Advanced Political Economy, consecutive with course 7, taking up again topics of production, exchange, and consumption, which are studied in greater detail and by more independent methods than in the first year, especially by the study of problems, the examination of cases, and the preparation of theses.

9 *Finance.* [Seniors.] 1 hr. both terms.

A second-year course in money, banking, taxation, and public debts. The exercises consist of papers on assigned topics. Courses 8 and 9 are the continuation into Senior year of course 7; the time and topics being divided for convenience of choice.

10 *Social Science.* [Seniors.] 1 hr. both terms.

A very elementary course in the structure of society, and the origin and laws of development of civilization, on the basis of prehistoric science, ethnology, and archaeology. The topics are

illustrated by plates from the whole literature of Anthropology, and by visits to the museum. The course is occupied entirely with positive information and scientific methods, and does not take up any of the subjects of criticism and speculation popularly connected with "social science." The class consists of three sections. The English section reads Tylor's *Anthropology* and Joly's *Man Before Metals*. The French section reads Debieuvre's *L'homme avant l'histoire* and *Quatrefages' Histoire Générale des Races Humaines*. The German section reads Lippert's *Kulturgeschichte*. The exercises, for the French and German sections, are an hour and a quarter each, and count as two hours.

Professor HADLEY :—

11 *Industrial History of the United States since 1850.*

[Seniors.] 2 hrs. 1st term.

Open only to those who have studied Political Economy and are ready to do original work in collecting and arranging statistics.

12 *Modern Economic Theories.* [Seniors.] 2 hrs. 2d term.

An account of some of the attacks upon the current doctrines of Political Economy, especially on the part of the socialists. Open only to those who have completed a course in Political Economy.

(Courses 14 and 13 make together one continuous course running through the year.)

Professor PHELPS :—

13 *Law.* [Seniors.] 2 hrs. 2d term.

The nature, foundation, obligation, and limits of civil law. The municipal law of this country—its derivation, history, and fundamental principles. Its practical application to the rights of the citizen in respect to personal security and liberty, the domestic relations, real and personal property, and contracts. The Constitution of the United States. International Law. The instruction will be by lectures based upon text-books to be read in connection.

Mr. RAYNOLDS :—

14 *Law.* [Seniors.] 2 hrs. 1st term.

Classification of Law. Character and subdivisions of public and private law. Nature and sources of statutory law; organization and action of legislative authorities. Nature and mode of development of unwritten law; organization and procedure of

the judicial authorities. Historical sources of English law; Teutonic tribal institutions, the feudal system, the Roman civil law, the medieval maritime codes. Recitations from Pomeroy's Municipal Law, with explanations.

III. HISTORY

Professor WHEELER :—

- 15 *History of Europe since 1879.* [Seniors.] 2 hrs. both terms.
Mainly political; introductory to European politics of our day.
- 16 *English History.* [Seniors.] 3 hrs. both terms.
Political and constitutional. Particular attention is given to the origin and development of the system of self-government. The course is of especial value to those who intend to study law.
- 17 *English History since the Accession of George III. (1760).* [Seniors.] 2 hrs. both terms.
A special study of the actual workings of the present constitutional system will be a prominent feature of this course.

Professor ADAMS :—

- 18 *Mediaeval History.* 2 hrs. both terms.
The object of the course is to furnish an outline of the general history of Europe, and to follow the development of political, intellectual and religious civilization through the period which lies between ancient and modern history.
- 19a *The Beginning of the Middle Ages.* 1 hr. both terms.
b *The End of the Middle Ages.* 1 hr. both terms.
These courses are given in alternate years. Course a in 1889-90; not open to those taking course 18.
They trace somewhat in detail the events of these two transition periods. Course a will consider the fall of Rome, the establishment of Christianity and the Roman Church, the German invasions, and the beginning and organization of the new governments.
Course b will follow the commercial and political development of the period, the rise of the third estate, the revival of learning, the beginning of modern science, and the religious reformation.
- 20 *American History.* [Juniors.] 2 hrs. both terms.
In the colonial period the development of self-government and the formation of the union, in the later period the history of political parties and of disputed constitutional questions, will receive especial attention.

IV. MODERN EUROPEAN LANGUAGES

Professor KNAPP :—

21 *French.* 3 hrs. both terms.

Old French and Anglo-Norman: Schwan's *Grammatik des Altfranzösischen*. *Les Plus Anciens Monuments*, edd. Koschwitz, Stengel, and G. Paris. *Chanson de Roland*, ed. Gautier. *Roman de la Rose* (ed. Méon), compared with the M. E. version found in Chaucer. *Roman de Rou* (Norman Conquest), ed. Andresen. *Marie de France* (Fabliaux), ed. Roquefort. *Laws of William the Conqueror*, ed. Schmid. (Some of the above, as the "Chanson de Roland," will be read and explained by the professor, as University lectures, at extra hours.)

21a *French.* 2 hrs. both terms.

Early French Drama: Mysteries, Farces, etc. Text-book, Fournier's *Théâtre Français avant la Renaissance*.

22 *Spanish.* 2 hrs. both terms.

The classic *Novela*: *Lazarillo de Tormes*. *Don Quijote de la Mancha*, and Cervantes' novels *La Gitanilla* and *Rinconete y Cortadillo* Madrid edd.

23 *Spanish.* 3 hrs. both terms.

The instructor's Grammar and Modern Readings. Castro's *Historia de España*, Novels by Valera, Selgas, and Galdós, Madrid edd.

24 *Italian.* 2 hrs. both terms.

Dante, ed. Scartazzini. Select *Novelle* from Boccaccio.

25 *Italian.* 3 hrs. both terms.

Gallenga's Grammar. Stories by Dall' Ongaro and De Amicis. Manzoni's *Promessi Sposi*. Checchi's *Italia dal 1815 ad oggi*.

26 *French.* 3 hrs. both terms.

Classic Drama: Garnier, Corneille, Molière, Géroze; *Histoire de la Littérature Française*.

M. BERGERON :

27 *French.* 3 hrs. both terms.

Littérature du xvi^e siècle, éd. Darmesteter et Hatzfeld. Boileau: *Satires et Épitres*. Géroze.

28 *French.* 3 hrs. both terms.

Advanced Syntax and Composition, designed as a Normal course.

- 29 *French (Sophomore).* 3 hrs. both terms.
 Rapid reading in Mérimée's *Carmen*, Colomba, and *Lettres*.
 De Tocqueville's *Ancien Régime*. Duruy, concluded.

Mr. STRONG :—

- 30 *French (Freshman).* 3 hrs. both terms.
 Rapid readings in modern French authors, Knapp's ed.
 Duruy's *Histoire de France* begun. Plays.

Mr. GOODRICH :—

- 31 *German Drama.* 3 hrs. both terms.
 Critical study of selected plays from Lessing, Goethe, and
 Schiller.

- 32 *Goethe.* 2 hrs. both terms.
 During the first term selections from Goethe's shorter poems
 are read. The poet's life down to the death of Schiller, in 1805, is
 studied, with the aid of selected readings, papers, and lectures.
 During the second term, *Faust*, Part i.

- 33 *Elementary German (Freshman).* 3 hrs. both terms.

Mr. GRUENER :—

- 34 *German Novels and Plays.* 3 hrs. both terms.
 A course for rapid reading.

- 35 *German Composition.* 2 hrs. both terms.
 A course devoted to written and oral work in German compo-
 sition.

Mr. STRONG :—

- 36 *Advanced German Prose.* 2 hrs. both terms.
 Selections from historical and critical works, with special refer-
 ence to German history, literature, and civilization. Reading
 from Schrakamp's *Deutsche Geschichte*; Freytag's *Bilder aus der*
Deutschen Vergangenheit; Schiller's *Dreissigjähriger Krieg*, etc.
 37 *German, Second Year (Sophomore).* 3 hrs. both terms.

Professor BEERS :—

- 38 *19th Century Literature.* [Seniors.] 3 hrs. both terms.
 The history of English literature from 1785 to 1870. Authors
 from Cowper to Browning are studied partly by critical readings
 in the class-room, partly by outside assigned reading in connec-
 tion with the English loan library, and partly through lectures and
 text-books. The last half of the second term is devoted to Amer-
 ican literature.

- 39 *Anglo-Saxon and Early English.* 2 hrs. both terms.
 Texts used : Sweet's Anglo-Saxon Reader and First Middle English Primer, the Anglo-Saxon Chronicle (Skeat's edition), and Morris and Skeat's "Specimens," Part i.

Professor COOK :—

- 40 *English Masterpiece Course.* [Jun.] 3 hrs. both terms.
 Critical readings in selected portions of Chaucer, Spenser, Shakspeare, Bacon, Milton, Dryden, Burke, and Scott, with oral discussion of the literary principles involved and exemplified, and frequent presentation of brief papers on topics suggested by the reading and discussion.
- 41 *English Language.* 2 hrs. both terms.
 Lounsbury's History of the English Language. Lectures. Etymology is studied with the aid of Skeat's Dictionary ; the East-Midland dialect of Early English in Chaucer ; and the Scotch dialect in Burns.

V. ANCIENT LANGUAGES AND LINGUISTICS

Professor HARPER :—

- 42 *Hebrew (first course).* 4 hrs. 1st term.
 Genesis i-viii, and with these chapters (a) the grammatical principles of the language ; (b) acquisition of a vocabulary ; (c) translation of English into Hebrew.
- 43 *Hebrew (second course).* 2 hrs. 2d term.
 Deuteronomy, critical translation, with (a) review of grammar ; (b) study of accents ; (c) special exercises in Hebrew prose composition ; (d) principles of Hebrew poetry.
- 44 *Hebrew (third course).* 2 hrs. 2d term.
 Hexateuchal analysis, including (a) translation and comparison of the several documents of which the Hexateuch is composed ; (b) examination of the grounds on which the analysis rests ; together with (c) special study of the principal points of syntax.
- 45 *Arabic.* 2 hrs. both terms.
 Arabic version of Genesis, chapters i-iii, and with these chapters the principles of the language (Lansing's Arabic Manual) ; selected portions of the Kuran ; lectures on contents and arrangement of the Kuran.

- 46 *Assyrian.* 2 hrs. both terms.
Principles of the language; selections in cuneiform text, Lyon's *Assyrian Manual*, Delitzsch's *Lesestücke* and *Assyrische Grammatik*; lectures on Assyrian History and Literature.
- 47 *Old Testament Prophetical Literature.* 2 hrs. both terms.
Including (a) the writings of the leading prophets, Joel, Amos, Hosea, Isaiah, Jeremiah, etc.; (b) the growth and development of prophecy in the various periods of Hebrew history; (c) a study of prophetic life and methods, prophetic politics, prophetic historiography, prophetic ethics and theology; (d) a comparison of Old Testament prophetic literature with the corresponding literature of other nations.

Professor WHITNEY :—

- 48 *Sanskrit.* 4 hrs. both terms.
A first-year's instruction in Sanskrit, beginning with the instructor's *Sanskrit Grammar*, and passing on to Lanman's *Reader*. A sketch of Sanskrit literature is given in connection with the exercises during the latter part of the year.
- 49 *Linguistics.* 1 hr. 2d term.
A series of exercises—mingled lecture, recitation, and discussion—on the leading topics of the general study of language, following and using as text-book the instructor's *Life and Growth of Language*, is given if a class of six or more is formed.

Professor PECK :—

- 50 *Latin Composition.* 1 hr. both terms.
Besides written and colloquial exercises in Latin there will be studies in the grammatical and stylistic peculiarities of the language. The course is particularly recommended to those who expect to teach Latin.
- 51 *Cicero, Quintilian, Tacitus.* 3 hrs. both terms.
The *Brutus* of Cicero; the 10th and 12th books of *Quintilian*; the *Dialogue on Orators* and the *Annals* (i-vi) of *Tacitus*.
- 52 *Catullus, Vergil, Horace, Juvenal.* 2 hrs. both terms.
History of Latin poetry; the *Georgics* of Vergil; the *Satires* and *Epistles* of Horace.
- 53 *Livy.* 2 hrs. 1st term.
Rapid reading from *Livy's* legendary and historical books; position of *Livy* in the development of prose Latin.

- 54 *The Early Dramatists and Terence.* 2 hrs. 2d term.
History of the Roman theater; studies in the fragments of the early plays; rapid reading of Terence.

Professor H. P. WRIGHT :—

- 55 *Plautus.* 2 hrs. 1st term.
The Menaechmi and Pseudolus.

Mr. F. G. MOORE :—

- 56 *Seneca.* 2 hrs. 2d term.
De Providentia and De Constantia Sapientis.

Professor SEYMOUR :—

- 57 *Greek Tragedy.* 2 hrs. 1st term.
The Prometheus and Eumenides of Aeschylus, with special reference to metres and scenic antiquities.
- 58 *Plato.* 2 hrs. 1st term.
The Gorgias.
- 59 * *Greek Tragedy.* 2 hrs. 2d term.
The Persians of Aeschylus, and the Ajax and Oedipus Coloneus of Sophocles.
- 60 *Plato.* 2 hrs. 2d term.
The Republic.
- 61 *Pindar.* 2 hrs. 2d term.
Selected odes, with a sketch of lyric poetry.
- 62 *Demosthenes.* 2 hrs. 2d term.
The Oration on the Crown.
- 63 *Greek Testament.* 1 hr. 2d term.
A philological, not theological, interpretation of St. Paul's Epistles to the Corinthians.

Assistant Professor GOODELL :—

- 64 *The Greek Element in the English Language.* 1 hr. 1st term.
A practical course in tracing the etymology of English words derived from Greek. Especial attention will be given to scientific terms, and to ascertaining the principles which should be followed in forming such terms.

- 65 *Topography and Monuments of Athens.* 1 hr. 2d term.
Lectures, recitations, and seminary work. It is intended that all members of the class shall gain a clear general idea of the topography and existing monuments of Athens and vicinity, and that each member shall add to this a more detailed knowledge of some one portion of the subject.
- 66 *Socrates.* 2 hrs. 1st term.
Study of Socrates' personality, teaching, and influence. The course includes rapid reading of the *Memorabilia* of Xenophon, with illustrations from Plato.

Assistant Professor REYNOLDS :—

- 67 *Euripides.* 2 hrs. 1st term.
Rapid reading of the *Alcestis*, *Ion*, and *Hercules Furens*.
- 68 *Greek Composition and Sight Reading.* 2 hrs. 2d term.
Alternate exercises in composition and in the translation at sight of selections from Xenophon. The course is designed especially for those who intend to teach.

Mr. KITCHEL :—

- 69 *Greek Tragedy.* 2 hrs. 2d term.
The *Seven* against Thebes of Aeschylus, and the *Phoenician Women* of Euripides.

VI. NATURAL AND PHYSICAL SCIENCE

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- 71 *Practical Astronomy.* [Seniors.] 4 hrs. 1st term.
Loomis's *Practical Astronomy*. Students have the free use of a portable transit instrument for observations.
- 72 *Meteorology.* [Seniors.] 2 hrs. 2d term.
Loomis's *Meteorology*. Daily study of the current weather maps of the signal service.

Professor J. D. DANA :—

- 73 *Geology.* [Seniors.] 2 hrs. 1st term.
Geology—physiographic, lithological, and historical. Dana's *Manual*.
- 74 *Geology.* [Seniors.] 2 hrs. 2d term.
Remainder of the historical Geology and dynamical Geology.

75 *Advanced Geology.* [Seniors.] 2 hrs. both terms.

In connection with the study of the Manual, the reading and discussion of original memoirs and other publications treating of the topics in the course, together with work in the field. Excursions. Open only to advanced students in Geology, who have also some knowledge of Chemistry and Mineralogy.

Professor EATON :—

76 *Botany.* [Juniors.] 2 hrs. 2d term.77 *Pteridology and Bryology.* [Seniors.] 2 hrs. 1st term.

This course consists of practical work in the preparation and microscopic examination of vegetable tissues, with especial reference to the structure of ferns and mosses. It is limited to six who have taken course 76.

Professor A. W. WRIGHT :—

78 *Physics.* [Seniors.] 2 hrs. both terms.

Two exercises each week, chiefly practical work in the Sloane Physical Laboratory, with measurements, especially in heat, light, and electricity, each exercise occupying two hours. As introductory to the laboratory practice, the exercises, during a portion of the first term, consist of recitations or discussions upon the theory and methods of physical measurements, the use of instruments, and other special topics. Laboratory facilities are also freely accorded to students of the course at other times than those of the stated exercises. Kohlrausch's Physical Measurements; Glazebrook and Shaw's Practical Physics; Stewart and Gee's Practical Physics; Ayrton's Practical Electricity; Kempe's Handbook of Electrical Testing; Everett's Units and Physical Constants, etc.

In case the number of applicants is greater than can be accommodated, preference is given to those having a higher standing in Physics and Mathematics.

Professor E. S. DANA :—

79 *Mineralogy and Crystallography.* 2 hrs. both terms.

Practical study of mineral species by means of blowpipe analysis and other methods; mathematical study of crystals by the methods of analytical and spherical trigonometry, as also of their optical properties. The time is divided about equally between the two parts of the subject; the practical exercises may be prolonged to cover two hours when but little outside preparation is called for.

- 80 *Descriptive Mineralogy.* [Seniors.] 1 hr. both terms.
Advanced course in the study of mineral species for those who have already gone through course 79.
- 81 *Petrography.* [Seniors.] 1 hr. both terms.
The study of rocks, chiefly by the microscope, involving also a preliminary study of the form and optical characters of the minerals common in crystallized rocks. The exercise may be extended over two hours. Limited to those who have taken course 79.

Professor GOOCH :—

- 82 *Experimental Inorganic Chemistry.* 3 hrs. both terms.
Chiefly practical exercises in the laboratory supplemented by recitations and lectures. This course is preliminary to the other courses in Chemistry and to the course in Biology.
- 83 *Experimental Organic Chemistry.* 3 hrs. both terms.
An introduction to the study of the compounds of Carbon. The work is chiefly in the laboratory. Open to those who have previously taken course 82.
- 84 *Analytical Chemistry (first course).* 3 hrs. both terms.
Laboratory practice in the processes of ordinary qualitative analysis and the principles of quantitative analysis by volumetric methods. Open to those who have taken course 82.
- 85 *Analytical Chemistry (second course).* 3 hrs. both terms.
Laboratory practice in the methods of gravimetric quantitative analysis. Open to those who take also course 84, or have taken it previously.

In the last four courses two hours in the laboratory count as the equivalent of a single recitation hour; and in all a special laboratory fee is charged.

[Courses 86, 87, 88 with course 82, constitute a connected and continuous line of study in Biology, extending through the Junior and Senior years.]

Professor CHITTENDEN :—

- 86 *Physiology.* [Juniors.] 1 hr. both terms.
Huxley's Lessons in Elementary Physiology, with occasional lectures and illustrative experiments. Also, portions of Foster's Physiology with demonstrations. This course is designed as a preparation for courses 88 and 87 of Senior year, and is open only to those intending to take these courses.

87 *Physiological Chemistry.* [Seniors.] 4 hrs. 2d term.

Four exercises a week, of a minimum of two hours each, in the laboratory of physiological chemistry. This forms a continuation of course 88 and is open only to those who have taken courses 82 and 86 in Junior year. The time is devoted mainly to a study of the chemistry of the connective, contractile and nerve tissues, of the chemical processes of salivary, gastric and pancreatic digestions, and so far as the time allows, of other subjects connected with the physiology of nutrition.

A short course of lectures by Professor S. I. Smith on Embryology, and a somewhat longer one by Professor Chittenden on Experimental Toxicology are also open to students in the above course.

A laboratory fee is charged for courses 87, 88. The student in addition must bear the expense of gas, flasks, etc., which should not exceed ten dollars.

Professor S. I. SMITH :—

88 *Comparative Anatomy and Histology.* [Sen.] 4 hrs. 1st term.

Laboratory work based on Huxley and Martin's Practical Biology. Four exercises, of a minimum of two hours each. The time is devoted principally to practical work with the microscope and to dissecting, with special reference to the rudiments of biology and the elements of the morphology of animal tissues. The student is required to make microscopical preparations, keep careful records of his work, and pass frequent examinations. Open only to those who have taken courses 82 and 86 in Junior year, and to be followed by course 87, 2d term.

VII. MATHEMATICS

It is strongly recommended by all the instructors in the mathematical department that those who intend to study advanced mathematics or the natural and physical sciences, or who expect to become engineers, should take course 89 in the Calculus in Junior year.

Professor NEWTON :—

89 *Calculus.* 3 hrs. both terms.

90 *Integral Calculus and Mechanics.* [Sen.] 3 hrs. both terms.

Mean values and probability; differential equations; analytical statics and dynamics.

- 91 *Shooting Stars and Meteors.* [Seniors.] 1 hr. both terms.
The mathematical theories of these bodies, and the treatment of the observations of them.

Professor GIBBS :—

- 92 *Vector Analysis.* [Seniors.] 2 hrs. 1st term.
Elementary course, in which the simpler problems of geometry, kinematics, and mechanics are treated by vector methods.
- 93 *Vector Analysis.* [Seniors.] 2 hrs. 2d term.
Advanced course, open only to those who have taken the preceding.
- 94 *Computation of Orbits.* [Seniors.] 1 hr. both terms.
Vector methods will be used, and the course is open only to those who take course 92.

Professor E. L. RICHARDS :—

- 95 *Higher Trigonometry.* 1 hr. both terms.
Exponential and logarithmic series; DeMoivre's theorem; theory of proportional parts; applications. (Calculus desirable but not required.)

Professor PHILLIPS :—

- 96 *Analytical Geometry.* 2 hrs. both terms.
An extension of the course in the plane and solid Analytical Geometry of Sophomore year, including the use of determinants and trilinear coördinates: applications to higher curves, and to the theory of map-projection.
- 97 *Descriptive Geometry.* 1 hr. both terms.
The principles of orthographic projection, shades and shadows, and linear perspective. Attention is given both to the mathematical treatment and to the mechanical drawing. The course is intended specially for those who expect to study engineering or architecture.

Assistant Professor BEEBE :—

- 98 *Geodesy.* 1 hr. both terms.
Trigonometrical surveying; figure of the earth; problems in practical Astronomy; methods of the United States Coast Survey. Some time is given to the use of the theodolite. Students who desire to do so can take in addition one hour per week in practice in the use of instruments.
- 99 *Descriptive Astronomy.* 1 hr. both terms.
Young's Astronomy.

The following statements are added, to explain the general aim and scope of the instruction in various leading subjects of study.

GREEK—During the first two years, the student reads five or six books of Homer, dramas of Aeschylus, Sophocles, and Euripides, one or two comedies of Aristophanes, selections from the history of Herodotus, one or more orations of Demosthenes, Isocrates, or Lysias, the *Apology* or some dialogue of Plato; occasionally, the *Symposium* of Xenophon or selected dialogues of Lucian. These works are selected with a view to making the student familiar with the leading branches of Greek literature, and the most interesting phases of Greek life and thought. The most important grammatical principles are reviewed in Freshman year; in Sophomore year, grammatical questions are discussed rarely, except as they are necessary for the interpretation and illustration of the author's meaning. In reading the works of the poets, less attention is paid to linguistic and grammatical points than to their literary quality, to the structure of the poems, to poetic words, forms, arrangement of words, rhythm, and constructions; but the growth and development of the language are discussed as well as the development of the literature. In reading the orators and historians, the connection of thought and of events is made prominent. Greek prose composition is practised only so far as to aid the student in reading Greek authors, and to quicken his perception of nice distinctions in the order and choice of words and constructions.

In the optional courses of the Junior and Senior years, the student has the opportunity of reading the works of the lyric poets, other Greek dramas and other dialogues of Plato, parts of Aristotle (his *Politics* and *Ethics*), and the idyls of Theocritus; as well as of studying Greek inscriptions, and of doing more critical work on the Homeric poems than is suited to the first College year; and of learning the Modern Greek language. The history of Greek philosophy is studied. Students may also attend Professor Hoppin's fully illustrated lectures on Greek art, in the Art School.

LATIN is continued as a required study till the close of the Sophomore year, when it is intended that the student shall have gained clear conceptions of the genius of the language and its relations to other ancient and to modern tongues, a good knowledge of the characteristics of Latin literature and the essential facts of Roman history, and some appreciation of the position of Rome in the history of civilization. That subsequent reading of the language may be more easy and more exact, due attention is given in the early part of the course to forms, constructions, and idioms. From term to term the study of the literature is made more prominent, and the particular texts are treated as means

for the study of the public and private life of the Romans. Instruction is given mainly by recitations, but such work is supplemented by occasional lectures by the instructors and by conferences on papers presented by the pupils. In connection with the minute study of the authors, considerable time is given to oral and written reading at sight, and to composition in Latin.

For Juniors and Seniors who desire to continue their Latin studies, parallel courses are offered by different instructors, with different ends in view and by different methods. The characteristic of a course may be, *e. g.*, literature, or history, or philology, or antiquities, or the speaking and writing of Latin; and the methods of preparation and the classroom treatment vary accordingly. Topics suggested by the nature of the courses, or by individual tastes and intentions, are assigned to students, and papers thus prepared are discussed before the class. Lectures and the rapid reading of large amounts of text are more frequent than in the prescribed courses. The connection of Latin with English is emphasized, and written translations are from time to time required and criticised with reference both to their faithful reproduction of the Latin thought and their idiomatic English. German annotated editions are often used, not only for their intrinsic helpfulness, but also to encourage the practical use of that language. Students who give evidence of unusual capacity and attainments may be admitted to membership of graduate classes.

MATHEMATICS—In Geometry the exercises consist in recitations from the text-book, the original demonstration of theorems, and applications of the principles to the solution of numerical problems.

After the student has gained facility in the use of trigonometrical tables, the principles of Plane Trigonometry are applied to the problems of Mensuration, Surveying, and Navigation, and those of Spherical Trigonometry to the elementary problems relating to the celestial sphere.

In Algebra the elementary principles of the theory of equations are illustrated graphically, and the student is exercised in the numerical solution of equations of the higher degrees and the graphical representation of the relations of quantities.

In Analytical Geometry the student is carried through the elementary properties of the lines and surfaces of the second degree, and is introduced to the theory of map-projection.

These are studies of the Freshman and Sophomore years, and together with the elements of Astronomy which are pursued in Junior year, are regarded as essential parts of a liberal education.

In the Junior and Senior years opportunity is given in the elective courses to obtain a wider knowledge of Analytical Geometry and Trigonometry with their applications to Geodesy and Astronomy. A course is provided in Junior year in Differential and Integral Calculus,

designed for such as expect to make a serious study of any department of pure or applied mathematics.

In Senior year advanced subjects in the Calculus and the elements of Analytical Mechanics form one line of study.

An elementary and an advanced course are provided in what is called Vector Analysis. The object of these courses is to introduce the student to the methods of multiple algebra in geometry, mechanics, and physics. The matter taught is not entirely unlike that usually given in courses in Quaternions, but the method followed is in some respects nearer to Grassmann's than to Hamilton's. The elementary course is confined to the simplest algebraic relations of vectors. The advanced course includes differentiations with respect to position in space, and the theory of linear vector functions.

Students who show special aptitudes are exercised in the working up of subjects which require the use of the library and more prolonged investigation than the daily exercises of the class-room. Such work begins in Freshman year. There is a considerable collection of models which are used to assist the imagination in the various branches of study.

ENGLISH—The required work of Sophomore year has been described on page 37.

A course of three exercises a week in English Masterpieces is given through Junior year. Critical readings in selected portions of Chaucer, Spenser, Shakspere, Bacon, Milton, Dryden, Burke, and Scott. Discussion of the canons of poetry, and survey of the different species of composition exemplified by the writers chosen. Brief abstracts and original papers are presented frequently, and are criticised with reference to their form, their literary qualities, and their value as contributions to the mastery of the authors studied. The Riverside edition of Chaucer, Macmillan's Globe editions of Spenser, Milton, and Dryden, the Golden Treasury edition of Bacon, Morley's edition of Milton's English Prose Writings, and the Clarendon Press editions of Burke's Select Works, are used during the present year. The lives of the authors are studied in the English Men of Letters series, Brooke's Milton and Primer of English Literature, Morley's First Sketch of English Literature, and other convenient manuals.

An elective course of three hours a week in English and American literature of the 19th century is open to Seniors and Juniors. Portions of the writings of Cowper, Burns, Wordsworth, Coleridge, Scott, De Quincey, Byron, Shelley, Keats, Tennyson, Carlyle, Thackeray, George Eliot, Ruskin, Matthew Arnold, Clough, Rossetti, Swinburne, Irving, Bryant, Emerson, Hawthorne, Lowell, Longfellow, Holmes, Whittier and Thoreau are read in the class-room or assigned for outside reading to be followed by examinations. A series of thirty lectures is given in connection with this course, covering the authors named and the gen-

eral literary history of the period. Oliphant's *Literary History of England*, Stedman's *Victorian Poets* and Richardson's *American Literature* are used as reference or text-books.

A special library of from twenty to forty duplicate copies of the most useful editions of many writers has been established for supplementary readings. This library will be enlarged from time to time.

An elective course of two hours a week in the history of the English language is open to Seniors and Juniors. Lounsbury's *History of the English Language* and Oliphant's *Sources of Standard English* are used as text-books, and Skeat's *Etymological Dictionary* for reference. The Anglo-Saxon (or Old English) is studied in the prose selections of Sweet's *Anglo-Saxon Reader* and in Skeat's edition of the *Chronicle: Middle English* in Sweet's *First Middle English Primer* and in Chaucer; and the Northern Dialect in Burns.

English composition is prescribed through the whole of the Sophomore and Junior years. In the former, during the first term compositions are written as class-room exercises; sketches, descriptions, brief narratives and the lighter forms of the essay are preferred to pieces on more difficult or bookish themes. During the rest of the year five essays of a more elaborate character are written; and in the Junior year two essays in each term. Each student's work is criticised at least once during every term; in cases where special instruction is needed, as well as in all cases where it is desired by the writer, each composition is discussed in private interviews. Literary practice is also encouraged by three public exhibitions during the course; two at the end of the Senior year, the third about the middle of the Junior year. Those competing for the last receive special instruction whenever they desire it.

GERMAN—The student may pursue the study of German during each of the four years of his College course, if he so elect. While the study may be begun at the opening of any of the four years, it is strongly urged that the elementary work be done as early in the College course as possible, in case the student proposes to take up the language at all.

The courses of work for the successive years may be outlined as follows. During the first year the work consists of German grammar, translation of easy English phrases, sentences, and stories into German, and of easy German prose into English. Constant sight-translation is used as a means for developing and strengthening the student's vocabulary and for freeing him from dependence upon the lexicon and from the word-by-word methods which its use encourages. Especial care also is devoted to pronunciation. The work of the second year continues and extends that of the first year, taking up the translation of German prose, narrative, critical, and historical, composition, and sight-translation. Throughout the two years the aim in reading German is to cover as much ground as possible—from 500 pages upwards—in the

belief that thereby the student will acquire more command of the language than when a smaller amount is read with rigid attention to grammatical details. It is expected that at the end of the second year the student will be able to use the language in his work in other branches of study. Those, therefore, who are studying German solely with this end in view may perhaps abandon the language at this point ; but no student should begin the language unless he expects to devote at least two years to its study.

For the remaining years the elective courses vary from year to year ; but opportunity is given for the critical study of some of the masterpieces of German literature and for the study of periods in its history. Those who so elect may also have opportunity to take up the earlier German literature and to study the historic development of the grammar of the language. In this latter course all work will be done in German.

German readings are given by the instructors outside the regular College work, and advanced classes in composition formed, where German alone is spoken. German is constantly read aloud in the class-room, and all efforts, both in the class-room and in private, are made to improve the student's pronunciation and to help him to acquire some facility in expressing his ideas in German. But it is not a leading aim in the instruction in German to enable the student to converse in that language. Training in the ordinary conversational idiom may be had more profitably elsewhere and cannot form any considerable part of the class-room work. The student may acquire the language as a tool for use in other departments of study and may come in contact with the best works of German literature, studying their form and contents, and the lives and environment of their authors ; fluency in conversation must be acquired where the conditions are more fitted to the object which they are to effect.

FRENCH—This course may extend through the entire four years, involving the study of the leading epochs of the language and literature from their inception to the present ; embracing especially, with reference to English origins, the *Norman* dialect of the Old French as exhibited in the *Chanson de Roland*, the *Roman de Rou*, and the *Fabliaux* of Marie de France ; in the xv. and xvi. centuries the works of Villon, Marot, Rabelais, and Montaigne, as representatives ; the drama from the earliest *Mystères*, *Farces*, *Soties*, to Garnier, Corneille, Molière, and Racine ; in satire and criticism, Boileau ; dwelling particularly on the foreign and natural influences that moulded the language till it assumed its actual form. Attention throughout the earlier years is given to composition in French as the best method for training the attention, the memory, and the judgment, and the oral use of the language is insisted on for the courses in the Classical and Old French periods. Instruction is given by recitation, and lectures in French will be read

on the history of the language and literature, on which written French examinations will be required.

PHYSICS—The required course in Physics extends through the year with three exercises weekly. The general design of the course is to make the student acquainted with the fundamental principles of the science, to enable him to understand something of the methods of experiment and reasoning by which physical laws have been established, and to give him an insight into the degree of accuracy demanded in physical work. The subject of Electricity is treated at somewhat greater length than the other branches, and is fully illustrated by experimental lectures; in this direction the recent equipment of the Sloane Laboratory makes the department especially strong. During the Senior year there is an opportunity for those students desiring to avail themselves of it, to go forward with practical laboratory work, as is described in the list of elective courses.

CHEMISTRY—The study of this subject is optional. Four courses in experimental descriptive chemistry (inorganic and organic) and analytical chemistry are open to undergraduates. Instruction in these courses is given in practical exercises in the laboratory and demonstrations in the lecture room. Frequent examinations to emphasize the more essential points, as well as to test the progress of the student, are an important feature of the plan of work. It is the aim of these courses to teach the facts and principles of chemistry by the inductive and experimental method. Students sufficiently advanced have the opportunity to undertake the solution of problems demanding original thought and investigation.

POLITICAL SCIENCE AND LAW—The instruction in the elements of Political Economy is intended to give familiarity with the method and doctrines of the so-called "orthodox" economists, as the proper introduction which the student should have to the science, and as the basis for whatever may be offered later. Text-books are used with set lessons, constant examinations, both written and oral, discussions, and illustrations. The courses are arranged in the belief that the student will gain more under a classification which is adjusted to meet differences of interest and capacity. Those who take Political Economy in Junior year have an opportunity in Senior year to become acquainted with the history of the science and the controversies now going on in it, and to study more thoroughly special topics. In the course on Anthropology they are also offered an opportunity to become acquainted with the new sciences whose investigations are so important for the whole field of social science.

The course in law treats of municipal and international law as parts of a liberal education. The object is to study civil institutions,

both in their theory and in their positive form. The instruction is elementary, dealing with the fundamental facts and principles which underlie the civil polity of the American State, and is intended to give the student a correct knowledge of such essential facts about the life of the State and its accepted doctrines, as every educated man should possess, as well as to lead up to the professional study of law.

MENTAL AND MORAL SCIENCE, AND PHILOSOPHY—The courses in this branch of study begin in Junior year, and continue until graduation. During two-thirds of Junior year and the whole of Senior year, three hours per week of class-room work in Logic, Psychology, Ethics, and the Evidences of Religion, are required of every student: the remainder of the work in these and kindred subjects is elective.

LOGIC—In this subject there is an elementary required course, occupying three hours a week during the first half of the second term of Junior year. In this course attention is centered on the principles of correct definition and valid proof. A large part of the work of the students consists in the oral and written discussion of examples of definition and of deductive and inductive argument, the examples being partly in the condensed form usual in text-books on Logic, partly in the form of somewhat extended quotations from various authors on subjects of general interest. At the same time, and although the minutiae of the traditional Logic are ignored, pains is taken to secure the disciplinary value of the study as a training in abstract thinking and abstract statement.

PSYCHOLOGY—Required work in this subject begins with the last half of the second term of Junior year and continues into Senior year—the course thus comprising about twenty weeks of instruction in all. Although the earlier part of the course is taught with constant use of a text-book, upon which daily recitations are exacted, considerable time from the first is taken by the teacher in oral instruction, critical or supplementary of the text. One or more formal lectures on selected topics in Psychology are given each week. During the later part of the course, after the pupils have acquired some facility in the general subject, the instruction is chiefly by lectures upon the basis of a text-book. The course is completed by lectures discussing the doctrine of the Mind's nature, and its relation to the body. The course in Physiological Psychology extends through the entire year and is taught by lectures and recitations; it is illustrated by constant use of models, charts, histological preparations, apparatus for mixing color-sensations, etc. It is designed to go briefly over the whole ground of the modern experimental and physiological study of mental phenomena; especially as regards reflex and automatic cerebral action, the localizing of cerebral

function, the quality and quantity of sensation, psychometry, and the physical basis of the higher faculties. It may be elected either in Junior year as preparatory, or in Senior year as supplementary, to the required course in introspective Psychology.

HISTORY OF PHILOSOPHY—The study of this subject is elective and confined to Senior year. In the study of the History of Greek Philosophy the principal emphasis is laid upon Plato and Aristotle, and upon the post-Aristotelian Schools, as illustrating the permanent and most interesting problems of Philosophy.

The course in Modern Philosophy extends through the whole of the Senior year. The subject is taught both by recitations from the textbook, with accompanying remarks from the teacher, and by lectures. Effort is made to secure from each pupil the careful reading of at least one work of some prominent philosopher of the period considered in the class-room. Special emphasis is laid upon the philosophy of Kant. It is a constant aim to trace the development of modern speculative thought so as to throw light upon the principal questions in debate among present writers in philosophy.

PHILOSOPHY—In addition to the study of Philosophy as connected with the problems of rational Psychology, and as illustrated and enforced by the history of the development of Philosophy, the works of one or more of the leading authors are read and discussed, with such students as take the elective courses opened for this purpose. In this way the more general studies in Metaphysics and Ethics are supplemented by special information regarding selected subjects and writers.

MORAL SCIENCE, as a study, is intimately connected with the instruction in Psychology and Philosophy, as its foundations are discovered in the constitution of the human soul, and its method and fundamental relations are justified and enforced by those principles which are essential to all scientific thinking. In the department of Moral Science and of Practical Ethics, a somewhat thorough course is required of the entire Senior class, as an essential element of a thorough education and an important condition for practical usefulness. This general course is supplemented by special classes in scientific and practical Ethics, and particularly in the history and criticism of ethical theories, which are maintained through the year. In connection with these courses, a full course of lectures is delivered upon the nature, evidences, and authority of Christian Theism and the Christian History, particularly as related to a sound ethical theory of man and his destiny. This course of lectures is attended by all the members of the Senior class, and a thorough examination enforced.

SPECIAL HONORS

Special Honors are conferred at the end of Senior year.

One-year honors may be taken in any one of the following groups of studies; two-year honors in any one of groups 2, 4-7 :

(1). Philosophy. (2). Political Science, History, and Law. (3). English. (4). Ancient Languages. (5). Modern Languages (exclusive of English). (6). Natural and Physical Science. (7). Mathematics.

A candidate for a one-year honor must announce his intention to the Dean on or before December 1 of Senior year; a candidate for a two-year honor must report to the same officer by the same date of Junior year.

A candidate for a one-year honor must pursue with distinction in his Senior* year, and a candidate for a two-year honor in his Junior and Senior years, courses (whether prescribed or elective) amounting to an average of at least six hours per week in one of the specified groups. For a two-year honor the work must be so distributed that an average of at least four hours per week shall be taken in Junior year.

A candidate for either honor must present a meritorious thesis before May 1, of his Senior year.

[In the department of Modern Languages, elementary German will not be reckoned for honors. In the department of Mathematics, no student will be considered a candidate for honors, unless he has taken the Calculus.]

TERMS AND VACATIONS

THE PUBLIC COMMENCEMENT is held on the last Wednesday in June. The first term begins twelve weeks from the day after Commencement-day and continues thirteen weeks; the second term begins on the Tuesday after the first Thursday in January and continues until Commencement-day,

* But in group 3, work done in Junior year in English will be accepted in place of an equivalent amount of work done in Senior year.

with a Spring Recess—of eight days—including Easter. (See Calendar, p. 6.) The exercises of each term begin with prayers in the Chapel.

PUBLIC WORSHIP

PRAYERS are attended in the Battell Chapel, with reading of the Scriptures and singing, every week-day at 8.10 a. m., at which service the attendance of the students is required.

PUBLIC WORSHIP is held in the Chapel on Sundays, at which all the students are required to attend, except such as have special permission to attend the worship of other denominations, to which their parents belong. Such permission can be obtained only on presenting to the Dean a written request therefor from the parent or guardian.

DWIGHT HALL, a building erected on the College square, at the expense of Elbert B. Monroe, Esq., of Southport, Connecticut, and presented to the Corporation in 1886, is designed to furnish an attractive center for the religious life of the students of all the Departments, especially through the organized work of the Young Men's Christian Association of the University.

LIBRARIES AND READING ROOMS

The Library of the University, containing over 145,000 volumes, is open every week-day to all the students for consultation and for the drawing of books; in a separate part of the building is the Linonian and Brothers Library, a collection of over 30,000 volumes in general literature, specially selected for the use of the undergraduate students.

The College Reading Room, containing the principal newspapers and periodicals, American and foreign, is open to the students every day and evening without charge. There is also a reading room and a select library (partly for circulation and partly for reference) in Dwight Hall.

THE GYMNASIUM

THE GYMNASIUM is designed to provide all the students with opportunities for exercise, under the advice of a Director, who is a regularly educated physician. Members of the Freshman Class are required, during a part of the year, to take exercise in light gymnastics under the instruction of the Director; and any student may enter the class of general gymnastics, which is under the Director's immediate care. A thorough physical examination and measurement of each student is made yearly by the Director, and a record of these results is kept as a basis of advice as to exercise and regimen; an examination of this record shows that the standard of health of the average student improves during his College course.

Members of the other Departments of the University may avail themselves of the privileges of the Gymnasium (including the advice of the Director, the use of the apparatus, bowling alleys, and shower-baths), on the payment to the janitor, in advance, of a small fee.

EXPENSES

THE TREASURER'S BILLS are made out and delivered to the students three times a year, viz: three weeks before the close of each term or half-term, at which times they are payable. If not paid within two weeks of the time they are issued, interest is charged from the date of the bills, and the student is liable to be prohibited from reciting. Drafts on Boston, New York, and Philadelphia will be received at par.

The annual charge for tuition is \$125, and the charge for incidentals (including ordinary repairs, expenses of public rooms, gymnasium, libraries and reading room) is \$30. An additional charge of \$18 is made in the last bill of the Senior year, to cover the expenses of graduation.

ABSENCE ON LEAVE—A student who is absent from College on account of sickness, or for any other cause, and retains his place in his class, pays full tuition during such absence; such payment is required before the student can be admitted to examination.

BOARD is obtained at prices varying from three and a half to eight dollars a week. The average price is about five dollars and a quarter.

Rooms—There are in the College buildings nearly two hundred and fifty rooms occupied by students, at prices varying (according to location) from fifty cents to six dollars per week. These rooms are not furnished, and the rates charged do not include heat or light.

Farnam Hall (built in 1869-70) is named in commemoration of Henry Farnam, Esq., of New Haven, who bore the chief part of the expense of its erection; Durfee Hall (built in 1870-71) commemorates in like manner the generosity of Mr. Bradford M. C. Durfee, of Fall River, Mass.; Lawrance Hall (built in 1885-86) owes its name to a gift for this purpose from Mrs. Francis C. Lawrance, of New York City, in memory of her son, Thomas Garner Lawrance, of the Class of 1884, who died during his Senior year in College.

Students living out of College are not allowed to room in any building in which a family does not reside, except by special permission of the Faculty.

A few rooms in North College and North Middle College (rented at prices ranging from \$1 to \$1.50 per week), and a few others in Durfee, Farnam, and Lawrance Halls (at higher prices), are reserved each year for members of the Freshman Class; these rooms are all heated by steam, for which an additional charge of from twenty-five to thirty dollars per year is made.

Applications for rooms from those who expect to enter the Freshman Class in this College in September, 1890, should be sent to Professor Henry P. Wright (the locating officer), not later than June 1. As no single rooms are reserved, every application should be signed by two persons who wish to occupy a room together.

Members of the Junior, Sophomore, and Freshman Classes, occupying any of the College rooms, may retain the same rooms for another academic year, by making application in writing to the locating officer, on or before

Saturday, May 24, 1890. Rooms not reserved will then be offered to the Classes in order: choices will be allotted to the Junior Class on Tuesday, May 27, and to the Sophomore Class on Thursday, May 29.

PRICES PER WEEK OF ROOMS IN COLLEGE FOR 1890

When a room is occupied by two persons, each occupant will be charged with one-half the price named in this schedule. *Where a single person occupies alone a room having two bedrooms, each of which is directly lighted by an outside window, he will be charged ten per cent. in addition to the price set upon the room.*

\$0.50.—66, 67, 82 North Middle; 188, 189 Old Chapel.

\$0.75.—2, 3, 18 South; 49 South Middle; 65, 68, 81, 84 North Middle; 98, 99, 114 North.

\$1.00.—1, 4, 17, 20 South; 34, 47, 50, 63 South Middle; 79, 95 North Middle; 97, 100, 113, 116 North; 190, 191 Old Chapel.

\$1.25.—15, 31 South; 39, 43, 46, 55, 59, 62 South Middle; 71, 75, 78, 87, 91, 94 North Middle.

\$1.50.—7, 11, 14, 23, 27, 30 South; 38, 42, 48, 54, 64 South Middle; 74, 77, 80, 90, 93, 96 North Middle; 103, 106, 107, 110, 111, 119, 122, 123, 126, 127 North.

\$1.75.—6, 10, 13, 16, 22, 26, 29, 32 South; 40, 44, 45, 56, 60, 61 South Middle; 72, 76, 88, 92 North Middle; 133, 137, 141, 160, 167, 175 Farnam.

\$2.00.—8, 9, 12, 24, 25, 28 South; 37, 41, 53, 57 South Middle; 69, 73, 85 North Middle; 101, 104, 105, 108, 109, 112, 120, 124, 125, 128 North; 186, 187, 192, 193 Old Chapel.

\$2.50.—182, 183 Lyceum; 243 Lawrance.

\$3.00.—180 Lyceum; 250, 251, 260, 261, 270, 271, 281 Lawrance.

\$3.50.—142, 143, 158, 159, 161, 162, 176, 177 Farnam.

\$4.00.—130, 131, 134, 135, 138, 139, 140, 144, 145, 146, 147, 148, 149, 151, 152, 154, 156, 157, 164, 165, 168, 169, 172, 173, 174 Farnam; 282 Lawrance.

\$4.50.—129, 132, 163, 166 Farnam; 208, 215, 216, 223, 224, 231, 232, 239 Durfee; 248, 249, 258, 259, 268, 269, 279 Lawrance.

\$5.00.—178, 179 Lyceum; 202, 204, 206, 209, 210, 211, 212, 214, 217, 218, 219, 220, 221, 222, 225, 226, 227, 228, 229, 230, 233, 235, 237 Durfee; 241, 242, 245, 246, 247, 252, 253, 254, 255, 256, 257, 262, 263, 264, 265, 266, 272, 273, 274, 277 Lawrance.

\$5.50.—280 Lawrance.

\$6.00.—201, 203, 234, 236, 238 Durfee; 278 Lawrance.

The subjoined table gives near estimates of the ordinary annual expenses in College, omitting clothing and vacation charges.

	Lowest	General Average	Very Liberal
Treasurer's bill, tuition,	\$125	\$125	\$125
“ “ incidentals,	30	30	30
Rent and care of half-room in College,	15	75	110
Board, 37 weeks,	110	200	300
Furniture, average of half-room for 4 years,	10	20	50
Fuel (steam-heat) and light, for half-room,	15	20	28
Washing,	15	25	42
Text-books and stationery,	10	30	50
Subscriptions (to Societies, Sports, Periodicals, etc.),		30	100
Private servant, for special care of room,			25
Sundries,	10	75	190
Total,	\$340	\$630	\$1050

BENEFICIARY AID

The sum of \$13,000 and upwards, derived partly from permanent charitable funds, is annually applied by the Corporation for the relief of students who need pecuniary aid, especially of those preparing for the Christian ministry. In this amount are included the income of the LANGDON FUND, of four thousand dollars, bequeathed in 1835 by Solomon Langdon, of Farmington, Connecticut, and a portion of the income of the ELLSWORTH FUND, now over ninety thousand dollars, received since 1858 from the estate of the Hon. Henry L. Ellsworth (Yale College 1810); both these funds are used for the support of students intending to enter the ministry.

There is also a **LOAN FUND**, for the benefit of needy students, which has been constituted from repayments made to the treasury by former students who have received aid during the College course. No deserving student who will make good use of the opportunities of the College need be deterred from entering it by the cost of tuition. Those needing aid should apply to the President before November 1st in each year of the College course. No assignments from these funds are made before admission to College.

Assistance will be withdrawn from students who incur serious College censure, or who fail to maintain a reputable scholarship.

THE MORGAN FUND, bequeathed by the late Henry T. Morgan, of New York City, has been set apart by the Corporation, with the provision that the income shall be divided into scholarships (at present thirty-two in number, yielding \$125 each), to be assigned by the Faculty for the benefit of indigent and deserving students.

THE MARETT FUND, now amounting to one hundred and thirty thousand dollars, which was established by the will of Philip Marett, Esq., of New Haven, in 1869, and was received in 1889, has been appropriated by the Corporation for beneficiary scholarships, in aid of needy and deserving students.

THE HARMER FOUNDATION OF SCHOLARSHIPS, the proceeds of a bequest in 1854 from Thomas Harmer Johns (Yale College 1818), of Canandaigua, N. Y., comprises five scholarships, each yielding at least one hundred dollars a year, to be given to deserving students of small means.

THE LYON SCHOLARSHIP FUND, of forty-four hundred dollars, given in 1869-72 by Mr. Morris W. Lyon (Yale College 1846), of New York City, benefits four scholars, selected for their worth and need by the founder or the Faculty.

THE LUCIUS HOTCHKISS FUND, of ten thousand dollars, the bequest of Lucius Hotchkiss, Esq., of New Haven, in 1881, comprises four scholarships, the income of which is given to indigent and deserving students.

THE LEAVENWORTH SCHOLARSHIP FUND, now amounting to over nine thousand dollars, was established in 1882 by the late Hon. Elias W. Leavenworth (Yale College 1824), of Syracuse, N. Y., with the primary object of defraying in part the expenses of the education of students of good character and promise, bearing the surname of Leavenworth.

There are nineteen other Scholarship Funds, most of them of one thousand dollars, the income of which may be given to such students as shall be selected by the founders or the Faculty. In this number are included Scholar-

ships named in commemoration of William Allen, Charles Atwater, William S. Charnley, William E. Dodge, Thomas H. and Luther Fuller, Sereno Gaylord, Joel Hawes, John C. Holley, Samuel Holmes, Charles L. Ives, Elisha C. Jones, William A. Macy, John S. Mitchell, Peter Parker, Messrs. Raymond and Bordwell, and John Spaulding.

There are also opportunities for students in need of aid to render service to the College as monitors, etc.; in this way about nine hundred dollars is disbursed annually. And in general it may be said that the other means of self-help at the command of students are sufficient to enable many of those who have spare time to provide for the larger part of their College expenses.

By the liberality of Mr. William L. Andrews, of New York City, and as a memorial of his son, Loring W. Andrews, a member of the class of 1883, a well furnished library has been established, containing text-books and works of reference, to be loaned gratuitously to those students who have need to avoid the expense of purchasing such books. Permission to use this library can be obtained from the President.

FELLOWSHIPS AND SCHOLARSHIPS

THE DOUGLAS FELLOWSHIP, with an income of six hundred dollars a year, was founded in 1873, by Mrs. Samuel Miller, of New Haven, and named in memory of her brothers, the Rev. Sutherland Douglas (Y. C. 1822) and George H. Douglas (Y. C. 1828). The incumbent, who must be a recent graduate of this Department, pursuing non-professional studies in New Haven, is elected annually, but no person shall hold the Fellowship for more than three years.

THE SOLDIERS' MEMORIAL FELLOWSHIP, with an annual income of six hundred dollars, was founded in 1875 by Mrs. Theodosia D. Wheeler, of New Haven, in honor of the alumni who fell in battle as Union soldiers, in the war of 1861-1865, and in special remembrance of William Wheeler, of the Class of 1855. The incumbent must be, at

the time of his election, a graduate of this Department, of not more than three years' standing. He shall pursue non-professional studies, and may hold the Fellowship for a period not exceeding five years. In selecting the incumbent, the President and Professors are to give preference to one who has shown special proficiency in Greek; and for the further prosecution of Greek study, the Fellow may be allowed to spend a part or the whole of the time of his incumbency in Athens, in connection with the American School of Classical Studies, instead of in New Haven.

THE SILLIMAN FELLOWSHIP, founded in memory of Professor Benjamin Silliman, Professor of Chemistry, Mineralogy, and Geology in Yale College from 1802 until his death in 1864, has an annual income of six hundred dollars, and is awarded to a graduate of this Department who has given evidence of proficiency and promise in some branch of physical science. The incumbent is elected annually, but no person shall hold the Fellowship for more than three years.

THE JOHN SLOANE FELLOWSHIP in Physics, established in August, 1889, by the gift of ten thousand dollars from John Sloane, Esq., of New York City, is awarded annually by the Faculty to a graduate of this Department who has shown marked proficiency in the study of Physics, and gives promise of success in the prosecution and application thereof. The incumbent shall reside in New Haven for at least thirty-six weeks in each academic year, pursuing a course of study in Physics and the related branches of science, and acting as an assistant in the Sloane Physical Laboratory; he may be re-elected, but shall not hold the Fellowship for more than three consecutive years.

THE BERKELEY SCHOLARSHIP, founded in 1733 by the Rev. George Berkeley, Dean of Derry, and afterwards Bishop of Cloyne, and yielding about fifty-five dollars a year, is awarded to each student in the Senior Class who passes the best examination (which must be a creditable one) in the Greek Testament (Pauline Epistles), the first book of

Thucydides, the first six books of Homer's *Iliad*, Cicero's *Tusculan Questions*, Tacitus (except the *Annals*), and Horace ; provided he remain in New Haven as a graduate, one, two, or three years.

THE CLARK SCHOLARSHIP, being the income of a fund of two thousand dollars, given for this purpose by Mr. Sheldon Clark, of Oxford, Connecticut, is awarded in each Senior Class to the applicant who has attained the highest rank in the studies of the course ; provided he remain in New Haven for one year or two years immediately after graduation, pursuing a course of study (not professional) under the direction of the Faculty.

THE BRISTED SCHOLARSHIP, founded in 1848 by Mr. Charles Astor Bristed (Yale College 1839), of New York City, and yielding about one hundred and twenty dollars a year, is awarded, whenever there is a vacancy, to the student in the Sophomore or Junior Class who passes the best examination in the classics and mathematics. The successful candidate receives the annuity (forfeiting one-third in case of non-residence) until the end of the third year after graduation.

THE FOOTE SCHOLARSHIPS, founded in 1872 by a bequest of Harry W. Foote (Yale College 1866), of New Haven, and yielding five hundred dollars a year, are awarded to graduates of this Department, selected by the Corporation, who remain in New Haven for one or more years pursuing studies in the graduate courses of the Department of Philosophy and the Arts.

THE LARNED SCHOLARSHIPS, three in number, each having a fund of seven thousand dollars, were founded in 1877 by the bequest of Mrs. Irene Larned, of New Haven, and were augmented in 1888 by the bequest of Mrs. Urania B. Humphrey, of Norfolk, Connecticut. One scholarship is awarded in each Senior Class ; the incumbent must reside in New Haven, pursuing a course of advanced study under the direction of the Faculty.

THE MACY SCHOLARSHIP, being the income of a fund of ten thousand dollars, derived from a bequest of the Rev.

William A. Macy (Yale College 1844), of Shanghai, China, who died in 1859, is awarded, whenever there may be a vacancy, to a recent graduate of distinguished scholarship, who may hold it for a term of three years. He shall reside in New Haven, pursuing a course of non-professional study, and shall at the close of each College year present a meritorious thesis in evidence of his work during the previous year.

THE WOOLSEY SCHOLARSHIPS, each having the income of a fund of one thousand dollars, the gift of President Woolsey, in 1846-48, are awarded in successive years, one to the student in each Freshman Class, who passes the best examination in Latin Composition (excellence in which is essential to success), in the Greek of the year, and in the solution of algebraic problems. The successful candidate receives the annuity, during the four years of his College course, provided he maintains a good standing in character and scholarship, and in the Junior year makes himself acquainted with the Differential and Integral Calculus. The student who stands second at this examination receives for one year the income of the HURLBUT SCHOLARSHIP FUND, of one thousand dollars (established by Henry A. Hurlbut, Esq., of New York City, in 1859); and the student who stands third, the income for one year of the THIRD FRESHMAN SCHOLARSHIP FUND, of the same amount, given by Charles M. Runk, Esq., of Allentown, Pennsylvania, in 1865.

THE W. W. DEFORST SCHOLARSHIP, being the income of a fund of two thousand dollars, bequeathed in 1867 by William Wheeler DeForest, of New York City, is awarded to a student in each Senior Class who has attained distinction in the study of French while in College, provided he pursue for the year after graduation a further course of study in the modern languages, especially French, Spanish, Portuguese, or Italian, under the direction of the Faculty.

THE SCOTT HURTT SCHOLARSHIP was established in 1889 in memory of Scott Hurtt, of the class of 1878, Yale College, by his classmates and friends. The income of a fund

of five thousand dollars is assigned in June of each year to a member of the Sophomore Class, who is selected by the Faculty on the ground of approved scholarship; one-half of the income will be paid to the incumbent during his Junior year, and one-half during his Senior year, provided he continues to be in need of this assistance.

PREMIUMS

THE DEFOREST PRIZE, founded by David C. DeForest of New Haven, and consisting of a gold medal, of the value of one hundred dollars, is awarded "to that scholar of the Senior Class who shall write and pronounce an English Oration in the best manner," the President and Professors being judges.

TOWNSEND PREMIUMS, five in number, of twelve dollars each, founded in 1843 by the gift of Isaac H. Townsend (Yale College 1822), of New Haven, are awarded in each Senior Class for the best specimens of English Composition; all compositions receiving Premiums must be read in public.

THE DEFOREST MATHEMATICAL PRIZES were established by the late Dr. John DeForest (Yale College 1826) and were augmented by his son, the late E. L. DeForest (Yale College 1854), of Watertown, Connecticut. A first prize of one hundred dollars, and three second prizes of fifty dollars each, are offered to the Senior Class for worthy solutions of problems in pure and applied Mathematics. This year about sixty dollars from the same source will be offered in prizes to the Junior, Sophomore, and Freshman Classes respectively for the solution of mathematical problems.

WINTHROP PRIZES, the income of a fund of five thousand dollars given in 1871 by Buchanan Winthrop, Esq. (Yale College 1862), of New York City, are annually offered to the Junior Class "for the most thorough acquaintance with the Greek and Latin poets," particular attention being paid to elegance of scholarship and appreciation of

the spirit of the poetry, as shown at an examination during the latter half of the second term. The first prize is two hundred dollars, and the second prize is the balance of the income for the year.

The subjects for the examination in the Class of 1891 are as follows: in Greek, the Agamemnon, Choëphorae, and Eumenides of Aeschylus, and the Olympian Odes of Pindar; in Latin, Lucretius, Book iii, and the Georgics of Vergil.

THE HENRY JAMES TENEYCK PRIZES, the income of a fund of twenty-six hundred dollars, established in 1888 by the Kingsley Trust Association in memory of Henry James TenEyck (Yale College 1879), are awarded to the successful competitors at the Junior Exhibition, in the second term of each year. The competition is limited to eight speakers chosen from the higher grades of the Junior appointment list.

COLLEGE PREMIUMS are given each year in the Sophomore Class, for English Composition, and for Declamation.

THE SCOTT PRIZE for excellence in German is offered to the Senior Class, and the SCOTT PRIZE for excellence in French to the Junior Class; these are of the value of thirty dollars each, and are given in books, appropriately inscribed. The prizes were founded by the bequest of Henry W. Scott (Yale College 1863), of Philadelphia, who died in 1871.

THE LUCIUS F. ROBINSON LATIN PRIZES, from the income of a fund of five thousand dollars given in 1887 by the daughters of the late Lucius F. Robinson (Yale College 1843), of Hartford, will be awarded the present year to students showing special proficiency in Latin:—one series of prizes (of fifty, thirty, and twenty dollars, respectively) being open to members of the Senior and Junior Classes who have taken three hours per week in Latin electives; and a second series, of the same amounts, to members of the Sophomore Class.

BERKELEY PREMIUMS for excellence in Latin Composition are offered to the Freshman Class near the end of the

year, from the surplus income of the Berkeley Scholarship Fund.

THE HUGH CHAMBERLAIN GREEK PRIZE, being the income of one thousand dollars given for this purpose, in 1886, by the Hon. Daniel H. Chamberlain (Yale College 1862), of New York City, is awarded annually to that member of the Freshman Class who has passed the best examination in the Greek required for admission to College.

Candidates for this Prize will be required to pass the whole examination in Greek, the year of their admission to College, even though they may have been accepted already in some of the Greek subjects at a preliminary examination.

DEGREES

The degree of BACHELOR OF ARTS is conferred by the Corporation on those persons who have completed the course of academical exercises, as appointed by law, and have been approved on examination at the end of the course as candidates for the same. Candidates are required to pay their dues to the Treasurer as early as the Saturday before Commencement.

For the degrees of Master of Arts and Doctor of Philosophy, see page 103.

SHEFFIELD SCIENTIFIC SCHOOL

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FELIX KLEEGER, PH.B., *Assistant in Analytical Chemistry*
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THE SHEFFIELD SCIENTIFIC SCHOOL is devoted to instruction and researches in the mathematical, physical, and natural sciences, with reference to the promotion and diffusion of science, and also to the preparation of young men for such pursuits as require special proficiency in these departments of learning. Instruction is also given in French, German, English, History, Political Economy, and Constitutional Law.

The school, begun in 1847, and reorganized upon a more extensive scale in 1860, received in 1863, by the act of the Connecticut Legislature, the national grant for the promotion of scientific education under the Congressional enactment of July, 1862.

The name was conferred upon it by the Corporation of the University as a recognition of the late Joseph E. Sheffield, Esq., whose gifts to it at various times constitute its chief property and endowment.

OFFICERS AND INSTRUCTORS—Upon the Governing Board, consisting of the professors permanently attached to the School, devolve its internal management and the greater part of the instruction. In addition to these and the instructors employed during the current year, Professor Niemeyer, of the Yale School of the Fine Arts, gives instruction in Elementary and Free-hand Drawing.

THE BOARD OF STATE VISITORS consists of the Governor, and Lieutenant Governor, three Senior Senators, and the Secretary of the Board of Education.

The instruction is intended for two classes of students:—

I.—Graduates of this and other Colleges or Universities, and other persons qualified for advanced or special study.

II.—Undergraduates who desire a training, chiefly mathematical and scientific, in part linguistic and literary, for higher scientific studies, or for other occupations to which such training is suited.

INSTRUCTION FOR GRADUATE AND SPECIAL STUDENTS

Persons who have gone through undergraduate courses of study, here or elsewhere, may avail themselves of the facilities of the School for more special professional training in the physical sciences and their applications, gaining in one, two, or three years the degree of BACHELOR OF PHILOSOPHY, or in two additional years of Engineering study, that of CIVIL ENGINEER or that of DYNAMIC or MECHANICAL ENGINEER.

Or, engaging in studies of a less exclusively technical character, they may become candidates for the degree of DOCTOR OF PHILOSOPHY, under the conditions stated on page 103. The instruction in such cases will be adapted to the particular needs and capacities of each student, and may be combined with that given by instructors in other departments.

SPECIAL STUDENTS—For the benefit of those who, being fully qualified, desire to pursue particular studies without reference to obtaining a degree, special or irregular students are received in most of the departments of the School; not, however, in the Select Course, nor in the Freshman Class. It should be distinctly understood that these opportunities are not offered to persons who are incompetent to go on with regular courses, but are designed to aid those who have received a sufficient preliminary education elsewhere to increase their proficiency in special branches.

INSTRUCTION FOR UNDERGRADUATE STUDENTS

TERMS OF ADMISSION—Candidates must be not less than fifteen years of age, and must bring satisfactory testimonials of moral character from their former instructors or other responsible persons.

For admission to the Freshman Class the student must pass a thorough examination in the following subjects:

English—including grammar, spelling, and composition. In grammar, Whitney's Essentials of English Grammar, or an equivalent.

History of the United States.

Geography.

Latin—(1) Simple exercises in translating English into Latin. (Smith's "*Principia Latina*," Part i, is named as indicating the nature and extent of this requirement, and an acquaintance with it will be required, unless a satisfactory substitute is offered.) (2) Caesar—six books of the Gallic War, or their equivalent. (As advantageous substitutes for the last three books of Caesar may be suggested three books of Vergil's *Aeneid*.)

Arithmetic—Fundamental Operations, Least Common Multiple, Greatest Common Divisor, Common and Decimal Fractions, Denominate Numbers, including the Metric System of Weights and Measures; Percentages, including Interest, Discount, and Commission; Proportion, Extraction of the Square and Cube Roots.

Algebra—Fundamental Operations, Fractions, Equations of the First Degree, with one or several unknown quantities; Inequalities, Ratio and Proportion, Powers and Roots, including the theory of Exponents, the Binomial Formula for an Entire Exponent, and the transformation and Reduction of Radicals; Equations of the Second Degree, Progressions, Continued Fractions, Permutations and Combinations, the Doctrine of Limits, the Nature of Series, the Method of Indeterminate Coefficients, Fundamental Properties of Logarithms, Compound Interest and Annuities.

Geometry—Plane, Solid, and Spherical; including fundamental notions of Symmetry, and examples of Loci and Maxima and Minima of Plane Figures,—so much, for example, as is contained in Newcomb's *Geometry*, exclusive of the chapters on the Ellipse, Hyperbola, and Parabola.

Trigonometry—including the Analytical Theory of the Trigonometrical Functions, and the usual formulæ; the Construction and Use of Trigonometrical Tables; and the Solution of Plane Triangles:—so much, for example, as is contained in the first six chapters of Newcomb's larger *Trigonometry* and in Arts. 75-78 of chapter viii, with the explanation of the first five tables in Newcomb's five-figure *Logarithm*.

mic and Trigonometric Tables, which are furnished at the examinations in New Haven.

While no entrance examination is held in the *History of England*, candidates for admission are urgently advised to make themselves as familiar as possible with that subject, as a knowledge of it is essential to the most successful prosecution of some of the studies of the course.

Candidates will be allowed the option of passing on the above-named subjects in two successive years. In such cases they must present themselves for examination at the June examination of the first year in the following subjects or parts of subjects: *History of the United States, Geography, Arithmetic, Plane Geometry, and Algebra to Quadratic Equations.*

In order to have this preliminary examination counted, candidates must pass satisfactorily on four of the subjects; and notice of the intention to divide the examination must be given to Professor George J. Brush, Director of the School, on or before June 15.

In his preparation in GEOMETRY the candidate should, as far as practicable, have suitable exercises in proving simple theorems and in solving simple problems for himself. It is important, too, that he should be accustomed to the numerical application of geometric principles, and especially to the prompt recollection and use of the elementary formulae of mensuration. In TRIGONOMETRY he should be exercised in applying the usual formulae to a variety of simple reductions and transformations, including the solution of trigonometrical equations. Readiness and accuracy in trigonometrical calculations are also of prime importance to the candidate. If the use of logarithms is postponed in his preparation till Trigonometry is taken up (which is by no means necessary or advisable), he should then have abundant applications of them to all forms of calculation occurring in ordinary practice, as well as to those appearing in the solution of triangles. Finally, in all his calculations, he should study the art of neat and orderly arrangement.

In LATIN the student should have such continued training in parsing as shall make him thoroughly familiar with declensions and conjugations, and with the leading principles of syntax. To secure these results more effectually, the requirement has been adopted of simple exercises in translating English into Latin. As this course of exercises is designed solely as a preparation for reading, it should be begun at the

earliest stage of Latin study. A very large proportion of the deficiencies in the Latin examination for several years past has been due to the neglect of the suggestions of this paragraph, and to the attempt to read a Latin author with totally inadequate grammatical preparation.

The examinations for admission in 1890 take place at North Sheffield Hall, on Thursday, Friday, and Saturday, June 26, 27, 28 (beginning at 9 A. M. on Thursday); and on Tuesday and Wednesday, September 16, 17 (beginning at 9 A. M. on Tuesday).

In general, examinations for admission to the Freshman Class of the *next* year can be held only in June and September as specified; if in any case sufficient reason exists for an exception to this rule, a special fee (not exceeding fifty dollars) will be charged.

In 1890 examinations (for the Freshman Class only) will also be held in Exeter, N. H., in Andover, Mass., in New York City, in Albany, in Chicago, in Cincinnati, and in San Francisco (beginning on Thursday, June 26, at 9 A. M.), at places to be announced in local newspapers of the day previous. Candidates who propose to be present are requested to send their names to Professor George J. Brush, Director of the School, before June 15. A fee of five dollars will be charged for admission to the examinations outside of New Haven.

Candidates for advanced standing in the undergraduate classes are examined, in addition to their preparatory studies, in those already pursued by the class which they wish to enter. No one can be admitted as a candidate for a degree, later than at the beginning of the Senior year.

COURSES OF INSTRUCTION, occupying three years, are arranged to suit the requirements of various classes of students. The first year's work is the same for all; for the last two years, the instruction is chiefly arranged in Special Courses. The Special Courses most distinctly marked out are the following:

- (a.) In Chemistry ;
- (b.) In Civil Engineering ;
- (c.) In Mechanical Engineering ;
- (d.) In Agriculture ;
- (e.) In Natural History ;
- (f.) In Biology preparatory to Medical studies ;
- (g.) In studies preparatory to Mining and Metallurgy ;
- (h.) In select studies preparatory to other higher studies.

The arrangement of studies is indicated in the annexed scheme. A fuller statement of the methods and character of the instruction will be found below, p. 85. Unless otherwise specified, the number of hours given means hours per week.

FRESHMAN YEAR: INTRODUCTORY TO ALL THE COURSES

FIRST TERM:—*German*—Whitney's Grammar and Reader, 3 hrs. *English*—Lounsbury's History of the English Language, 1 hr.; Exercises in composition. *Mathematics*—The Derivatives of Algebraic Functions; Fundamental Properties of Equations; Plane Analytical Geometry; 3 hrs. *Physics*—Recitations, 2 hrs., with experimental lectures, 2 hrs. *Chemistry*—Mixer's; Recitations, 2 hrs.; laboratory practice, 2 hrs. *Elementary Drawing*—Practical Lessons in the Art School, 3 hrs.

SECOND TERM:—*Language, Physics, and Chemistry*—as stated above. *Mathematics*—Plane Analytical Geometry, continued, 3 hrs. *Physical Geography*—8 Lectures during the term. *Botany*—Gray's Lessons, 3 hrs. *Drawing*—Principles of Orthographic Projection; Isometric Drawing with application to drawing from models and structures, and isometric construction of objects from their orthographic projections; Projections of Shadows; Shading and tinting; Sections; Developments and Intersections of Surfaces; 4 hrs.

For the Senior and Junior years, the students select for themselves one of the following Courses :

(a.) IN CHEMISTRY :

JUNIOR YEAR :

FIRST TERM:—*Organic Chemistry*—Lectures and Recitations, 2 hrs. *Qualitative Analysis*—Recitations, 2 hrs.; Laboratory Practice, 20 hrs.; Blowpipe Practice and Determinative Mineralogy, 4 hrs. *German*—3 hrs. *French*—3 hrs.

SECOND TERM:—*Organic Chemistry*—Lectures and Recitations, 2 hrs. *Quantitative Analysis*—Laboratory Practice, 20 hrs.; Recitations, 2 hrs. *Mineralogy*—Blowpipe Analysis and determination of species, 4 hrs.; Lectures in Crystallography and Descriptive Mineralogy, 2 hrs. *German*—3 hrs. *French*—3 hrs.

SENIOR YEAR :

FIRST TERM:—*Organic and Theoretical Chemistry*—Recitations and Lectures, 2 hrs. *Agricultural Chemistry*—Recitations (optional), 2 hrs. *Quantitative Analysis*—continued six weeks, 20 hrs. *Organic Chemistry*—Experimental work during the remainder of the term, 20 hrs. *Geology*—Dana's; Recitations, 3 hrs. *Zoology*—Lectures, 2 hrs. *French*—3 hrs.

SECOND TERM:—*Theoretical Chemistry*—continued, 2 hrs. *Zoology*—continued, 2 hrs. *Agricultural Chemistry*—(optional), 2 hrs. *Analytical Chemistry*—Analysis of Minerals and Technical Products, 20 hrs. *Assaying*—(optional). *Metallurgy*—Lectures (optional). *Geology*—Dana's, 3 hrs. *Mineralogy*—(optional). *French*—3 hrs., during Winter half-term.

The Laboratory Practice of the second term of the Senior year may be devoted to such special branches of Analytical or Organic Chemistry as the student may desire, or to original investigations in connection with theses.

(b.) IN CIVIL ENGINEERING :

JUNIOR YEAR :

FIRST TERM: *Mathematics*—Analytical Geometry of Three Dimensions; Elements of the Theory of Functions; Differential Calculus, with applications to Geometry and Analysis; solution of Numerical Equations; 6 hrs. *Surveying*—Field work, 16 hrs. till November. *Drawing*—Descriptive Geometry, 6 hrs. from November. *German*—3 hrs. *French*—3 hrs.

SECOND TERM:—*Mathematics*—Integral Calculus with applications to Geometry; Rational Mechanics; 6 hrs. *Drawing*—Descriptive Geometry, concluded; Topographical; Practice in working drawings; 6 hrs. *Surveying*—Topographical and Rail Road curves, 16 hrs. *German*—3 hrs. *French*—3 hrs.

SENIOR YEAR :

FIRST TERM:—*Field Engineering*—Location of line of Railroad, setting out slope stakes, calculation of earth work; Lectures on economic location; Office work; Henck's Field Book; 20 hrs. till November.

Civil Engineering—Mechanics applied to Engineering; Resistance of Materials; Bridges and Roofs; Stone Cutting with Graphical Problems; 8 hrs. *Geology*—Dana's, 3 hrs. *Mineralogy*—Blowpipe Analysis and Determinative Mineralogy, 8 hrs. *French*—3 hrs.

SECOND TERM :—*Civil Engineering*—Bridges and Roofs; Building Materials; Stability of Arches and Walls; Foundations; 6 hrs. *Dynamics*—Principles of Mechanism; Thermodynamics; Steam Engine; 6 hrs. *Hydraulics*—Hydraulics and Hydraulic Motors, 3 hrs. *Drawing*—Designing; Practical Problems; Specifications and Estimates; 12 hrs. *Spherical Trigonometry and Astronomy*—Practical Astronomy, with field work, 6 hrs. *Geology*—3 hrs. *French*—3 hrs. during Winter half-term.

(c.) IN MECHANICAL ENGINEERING:

JUNIOR YEAR:

FIRST TERM :—*Mathematics*—Analytical Geometry of Three Dimensions; Elements of the Theory of Functions; Differential Calculus, with applications to Geometry and Analysis; Solution of Numerical Equations; 6 hrs. *Surveying*—Theory and Practice; 3 hrs. until November 1st. *Principles of Mechanism*—Kinematics, 1 hr. *Shop Visiting*—Study of Machine Details and Tools; 3 hrs., beginning when Surveying ends. *Drawing*—Descriptive Geometry, 3 hrs. *German*—3 hrs. *French*—3 hrs.

SECOND TERM :—*Mathematics*—Integral Calculus, with applications to Geometry; Rational Mechanics; 6 hrs. *Principles of Mechanism*—Applied Kinematics; Forms of Teeth of Wheels; Cams; Parallel Motions; Transmission of Power by Belts and Gearing, etc.; 1 hr. until Spring recess, then 2 hrs. *Shop Visiting*—continued, 3 hrs., until Spring recess. *Study of the Steam Engine*—2 hrs. after Spring recess. *Drawing*—Perspective and Shadows; Machine Elements; 3 hrs. *German*—3 hrs. *French*—3 hrs.

SENIOR YEAR:

FIRST TERM :—*Applied Mechanics*—Friction; Moment of Inertia; Centrifugal Force; Elasticity and Strength of Materials; Theory of Flexure and Torsion; Strains in Structures; Construction of Roofs and Bridges; Equilibrium and Pressure of Fluids; Theory of Flotation; Flows of Fluids in Pipes and Channels; Resistance of Ships; 9 hrs. *Machine Designing*—Practical Exercises in Designing Machine Details and Simple Machines, 12 hrs. *Study of the Steam Engine*—continued, 2 hrs. *Electricity* (optional)—Laboratory work, 3 hrs. *Visits of Inspection*—Examination of Machinery in operation; Reports of Visits. *French*—3 hrs.

SECOND TERM:—*Applied Mechanics*—continued; Hydrodynamics; Theory of Water-Wheels and Turbines; 6 hrs. *Thermodynamics*—3 hrs. *Study of the Steam Boiler*—2 hrs. *Electricity* (optional)—Laboratory work, 3 hrs.; Lectures, 2 hrs. *Machine Designing*—continued; advanced exercises in Preparing Designs and Working Drawings for Machinery; Estimates of Weight and Cost of Machinery; 12 hrs. *French*—3 hrs. during Winter half-term. *Thesis. Visits of inspection and Reports.*

(d.) IN AGRICULTURE:

JUNIOR YEAR:

The course is identical with that in Chemistry, except that in the second term lectures in Crystallography and Descriptive Mineralogy are omitted, and in the Spring half-term Botany is substituted for Determinative Mineralogy.

SENIOR YEAR:

FIRST TERM:—*Agriculture*—Recitations, 2 hrs. *Agricultural Chemistry*—Recitations, 2 hrs. *Geology*—Recitations, 3 hrs. *Zoology*—Lectures, 2 hrs. *Meteorology*—Lectures, 2 hrs. *Botany*—Laboratory Practice, 5 hrs. *French*—Recitations, 3 hrs.

SECOND TERM:—*Agriculture*—Recitations or Lectures, 2 hrs. *Agricultural Chemistry*—Recitations, 2 hrs. *Physiology*—Recitations or Lectures, 2 hrs. *Geology*—Recitations, 3 hrs. *Zoology*—continued, 2 hrs. *Heredity and Stock-Breeding*—Lectures, 2 hrs. during Winter half-term. *Sanitary Science and Public Health*—Lectures, 2 hrs. during Spring half-term. *French*—3 hrs. during Winter half-term.

(e.) IN NATURAL HISTORY:

Either Mineralogy, Zoology, or Botany, may be made the principal laboratory study, some attention in each case being directed to the other branches of Natural History.

JUNIOR YEAR:

FIRST TERM:—*Organic Chemistry*—Lectures and Recitations. *Qualitative Analysis*—Fresenius's; Laboratory Practice; Recitations. *Mineralogy*—Blowpipe Analysis and Determinative Mineralogy, 4 hrs. *Botany*—Gray's Manual, 3 hrs.; Laboratory Practice, 3 hrs. *German*—3 hrs. *French*—3 hrs.

SECOND TERM:—*Zoology*—Laboratory Practice, 6 to 12 hrs.; Recitations; Excursions (land and marine). *Botany*—Lectures; Laboratory

Practice in the identification of Phaenogamous Plants, 2 hrs. *Physiology*—Huxley's. *Embryology*—Lectures. *Mineralogy*—Blowpipe Analysis and Determinative Mineralogy, 4 hrs. Lectures in Crystallography and Descriptive Mineralogy, 2 hrs. *Physical Geography*. *German*—3 hrs. *French*—3 hrs.

SENIOR YEAR :

FIRST TERM:—*Geology*—Dana's, 3 hrs.; Excursions. *Zoology*—Laboratory Practice, 8 to 12 hrs.; Lectures, 2 hrs.; Recitations, 2 hrs.; Excursions. *Botany*—Laboratory Practice in the Preparation and Examination of Microscopical Specimens, illustrative of Stem-structure and of the Anatomy of the higher Cryptogamous Plants, 5 hrs.; Excursions. *Meteorology*—Lectures, 2 hrs. *French*—3 hrs.

SECOND TERM:—*Geology*—Dana's, 3 hrs. *Anatomy of Vertebrates*—Huxley's, 2 hrs. *Zoology*—Laboratory Practice, 8 to 12 hrs.; Recitations, 2 hrs.; Lectures, 2 hrs. *Botany*—Herbarium Studies, especially in the Cryptogamous Orders; Botanical Literature; Essays in Descriptive Botany. *Sanitary Science*, *Laws of Heredity*, and *Principles of Breeding*—Lectures. *French*—3 hrs. during Winter half-term.

Besides the regular course of recitations and lectures on structural and systematic Zoology and Botany, and on special subjects, students are taught in the laboratories to prepare, arrange, and identify collections, to make dissections, to pursue investigations, and when sufficiently advanced, to describe genera and species in the language of science. For these purposes, large collections in Zoology belonging to the College are available, as are also the private botanical collections of Professor Eaton.

(f.) IN BIOLOGY PREPARATORY TO MEDICAL STUDIES:

JUNIOR YEAR :

FIRST TERM:—*Organic Chemistry*—Lectures and Recitations, 2 hrs. *Qualitative Analysis*—Fresenius's; Laboratory Practice, 20 hrs.; Recitations, 2 hrs. *Mineralogy*—Blowpipe Analysis and Determinative Mineralogy, 4 hrs. *German*—3 hrs. *French*—3 hrs.

SECOND TERM:—*Comparative Anatomy and Histology*—Laboratory Practice, 18 hrs.; Lectures and Recitations, 1 hr. *Physiology*—Huxley's; Recitations, 2 hrs. *Embryology*—8 Lectures during the term. *Organic Chemistry*—continued, 2 hrs. *Mineralogy*—continued through Winter half-term, 4 hrs. *Botany*—Lectures; Laboratory Practice in the identification of Phaenogamous plants, 5 hrs. during Spring half-term Excursions. *French*—3 hrs. *German*—3 hrs.

SENIOR YEAR :

FIRST TERM :—*Physiological Chemistry*—Recitations and Lectures, 3 hrs.; Laboratory Practice, 13 hrs. *Organic and Theoretical Chemistry*—Lectures and Recitations, 2 hrs. *Zoology*—Lectures, 2 hrs. *Botany*—Laboratory Practice in the Preparation and Examination of Microscopical Specimens, illustrative of Stem-structure, and of the Anatomy of the higher Cryptogamous Plants, 5 hrs. *Geology*—Dana's, 3 hrs. *French*—3 hrs.

SECOND TERM :—*Physiological Chemistry and Experimental Toxicology*—Illustrative Lectures, Recitations, and Laboratory Practice, 27 hrs. *Geology*—Dana's, 3 hrs. *Zoology*—continued, 2 hrs. *Sanitary Science*—Lectures, 2 hrs. during Spring half-term. *Laws of Heredity and Principles of Breeding*—Lectures, 2 hrs. during Winter half-term. *French*—3 hrs. during Winter half-term.

(g.) IN STUDIES PREPARATORY TO MINING AND METALLURGY :

Young men desiring to become Mining Engineers can pursue the regular Course in Civil or Mechanical Engineering, and at its close can spend a fourth year in the study of Metallurgical Chemistry, Mineralogy, etc.

(h.) IN THE SELECT STUDIES PREPARATORY TO OTHER HIGHER STUDIES :

JUNIOR YEAR :

FIRST TERM :—*Mineralogy*—Blowpipe Analysis and Determinative Mineralogy, 8 hrs. *Astronomy*—Recitations, 4 hrs. *English*—Early English, 2 hrs. *History*—Green's Short History of the English People, 2 hrs. *French*—3 hrs. *German*—3 hrs.

SECOND TERM :—*Mineralogy*—Lectures ; Laboratory work, 8 hrs. during Winter half-term. *Botany*—Lectures ; Laboratory Practice in the identification of Phaenogamous Plants, 2 hrs. during Spring half-term. *Physical Geography*—4 hrs. during Winter half-term ; Recitations from Guyot and Lectures. *English*—Chaucer, Bacon, Shakspeare, 2 hrs. during Winter half-term, 3 hrs. during Spring half-term. *History*—Green's History, continued, 2 hrs. during Winter half-term, 4 hrs. during Spring half-term. *German*—3 hrs. *French*—3 hrs.

SENIOR YEAR :

FIRST TERM :—*Geology*—Recitations, 3 hrs. ; Excursions. *Zoology*—Lectures, 2 hrs. *English*—Shakspeare, 2 hrs. *Meteorology*—Lectures, 2 hrs. *Constitutional Law*—4 hrs. *French*—3 hrs.

SECOND TERM:—*Geology*—continued, 3 hrs. *Zoology*—continued, 2 hrs. during Winter half-term. *Meteorology*—Lectures, 2 hrs. during Winter half-term. *Sanitary Science*—Lectures, 2 hrs. during Winter half-term. *Political Economy*—Recitations, Exercises, and Lectures, 4 hrs. *English*—Shakspeare, Milton, Dryden, Pope, Gray, and later authors, 3 hrs. *French*—3 hrs. during Winter half-term.

Exercises in English Composition are required during the entire course from all the students. The preparation of graduating theses is among the duties of the Senior year.

Lectures and instruction in Military Science are annually given to the Senior class by the Professor of Military Science and Tactics.

The following account of the various subjects specified in the above scheme will explain the character and aim of the instruction.

ELEMENTARY CHEMISTRY—The exercises in Elementary Chemistry consist in recitations from a text-book, and experiments by the students in the laboratory to illustrate statements in the book. The object of the laboratory work is to facilitate the study of the subject, and to train the students in manipulation and in the observation of chemical phenomena. Notes are required and students are questioned on the experiments. As the class is divided according to scholarship at the end of the fall term, opportunity is given to those who are most proficient to make rapid progress.

ANALYTICAL CHEMISTRY—*Qualitative and Quantitative*—This study is intended to serve two purposes. Analytical Chemistry is used by the advanced student as a means of investigation in scientific or technical researches. The beginner, however, derives from its study advantages of another kind. The knowledge of the properties of chemical compounds, the familiarity with chemical reactions gained by experience in the laboratory, and the development of the reasoning faculties by the application of this knowledge in analytical processes, enable the student to generalize and classify chemical phenomena and aid him to understand the more abstract theories of chemical philosophy. The method of instruction adopted is conformed to this view of the uses of the study. Text-books are used and recitations are required, but the more important part of both study and instruction is performed in the

laboratory. In order to solve the problems which are there constantly presented, the student, aided by books and instructors, must learn both principles and their applications. The student, throughout his course in Analytical Chemistry, spends four consecutive hours in laboratory work during five days of the week. The laboratory, however, is kept open seven hours daily for the benefit of graduate students and others who desire to devote more time to this study.

Qualitative Analysis forms a part of the courses in Chemistry, Biology, Agriculture, and Natural History. Quantitative Analysis is one of the more important studies of the Senior year in the Chemical Course. It is also included to some extent in the Agricultural Course.

ORGANIC CHEMISTRY is taught by informal lectures and experimental illustrations as well as by text-book drill, a lesson from Richter's Organic Chemistry being given out for each instruction-hour. The class has two exercises weekly throughout three terms. The course is adapted to give a fairly complete outline of the subject and some familiarity with the more important bodies and classes of bodies.

In addition to this, the Senior students in the Chemical Course are required to spend 20 hours per week during the latter half of the first term in experimental work in Organic Chemistry. This is intended to supplement the preceding course and at the same time to serve as a preliminary training for such students as desire to make a special study of Organic Chemistry.

Opportunity is also afforded for the carrying on of original investigations in this subject, either in connection with theses or as a part of the regular work in the case of advanced students.

PHYSIOLOGICAL CHEMISTRY and EXPERIMENTAL TOXICOLOGY—Physiological Chemistry is taught by laboratory exercises, illustrative lectures, and recitations. Each student is provided with a suitable working place in the laboratory, well equipped with all needed apparatus and material. The regular course of work, designed especially for Senior students in the Biological Course, extends throughout one year and embraces a thorough study of the chemical composition of the various tissues and fluids of the body, together with a study of the chemical and physiological processes of respiration, digestion, secretion, excretion, and nutrition in general.

Beginning with a study of the albuminous bodies, the experimental work extends through the epithelial, connective, contractile, and nerve tissues. Proceeding then to digestion, the various digestive fluids are studied, artificial digestions are made, and the several products of digestive action isolated and studied. The blood and urine are next considered, and students are taught to make both qualitative and quantitative analyses of the latter and to identify abnormal constituents. A portion of one term is also devoted to a study of the chemical reactions

of the more important mineral and organic poisons, and their physiological action is determined experimentally. Students are also taught how to separate poisons from organic tissues and fluids, and to identify them, both by chemical and physiological reaction. During the latter half of the second term, Senior year, opportunity is afforded for the carrying on of original investigations on some selected subject in either physiological chemistry or toxicology, in connection with the preparation of graduating theses. The course of work is particularly recommended to students intending to enter upon a course of medical studies.

COMPARATIVE ANATOMY AND ELEMENTARY PHYSIOLOGY—The object sought in the instruction in Anatomy and Physiology, as taught during Junior year, is the manual and mental training of the student in the methods of investigation by which the facts and principles of these sciences have been established, and at the same time to give him a sufficient knowledge of their elements to enable him to pursue with profit the special studies of the Biological Course as a preparation for medical studies. With this end in view, five forenoons each week are given to laboratory work in Anatomy and Histology. The student, under the immediate supervision of the instructor, dissects specimens of a number of different animals, and is required to make careful sketches and records of his work; he also examines the different animal tissues with the microscope, makes microscopical preparations, and is taught the methods of anatomical and histological investigation. This work is reviewed each week by means of text-book and recitation, or by lecture and examination. The elements of Human Physiology are taught by text-book, recitations, and demonstrations. The physiology of digestion and nutrition is taught during Senior year in connection with Physiological Chemistry. During the last part of the term there is a short course of lectures on Embryology with special reference to Human Morphology.

GEOLOGY—The course in Geology includes recitations and oral instruction, extending through the entire year on alternate mornings. During the first half-year, the recitations are attended by the entire Senior Class, except those in the course in Mechanical Engineering. This part of the course includes Physical, Lithological and Dynamical Geology. These subjects are illustrated by diagrams and specimens. During the first term, each student is required to make a collection containing a specified number of the most important rocks and minerals, and to pass a thorough examination upon them at the end of the term; the object is to compel every student to become personally familiar with the appearance, as well as with the composition and other characters, of the rocks and minerals that are of the most importance in Geology, as well as in the arts.

The last half of the year is devoted to Historical Geology and Palaeontology. This part of the course is pursued by all the Seniors except those in the courses in Mechanical and Civil Engineering. Suitable collections of fossils are used to illustrate the subject.

Opportunities are afforded for optional geological excursions during the warmer months.

MINERALOGY—The instruction in Mineralogy is carried on by means of practical work in a laboratory especially fitted up for the purpose, and is intended to familiarize the student with the common minerals, attention being devoted especially to those which are of economic, geological, or scientific importance. To understand better the chemistry of the subject, the student is first made familiar with the simple chemical and blowpipe reactions useful in testing minerals, and applies this knowledge later to the determination of unknown species. The students have access to a labeled collection where they can study the properties of the minerals and make comparisons, and also to extensive unlabeled collections, arranged especially to give them practice and facility in the correct identification of minerals. In addition to the laboratory work, instruction is given in Crystallography, illustrated by a collection of models and natural crystals. The lectures in Descriptive Mineralogy to the more advanced students are illustrated by means of the extensive private collection of Professor Brush. The laboratory is provided with apparatus for the thorough chemical and physical investigation of minerals and with an extensive library to which the students have access. The laboratory is open seven hours each day to accommodate any who desire to devote more time and attention to the subject than is laid out in any of the prescribed courses.

ZOOLOGY—The instruction in Zoology includes a course of lectures on Systematic Zoology, Morphology, and Embryology, which are attended by all the Seniors except those in the courses in Mechanical and Civil Engineering. These lectures are generally given twice a week, and continue during about half the year. The students are required to keep careful notes of the lectures.

Students in the Natural History Course are also required to pursue a course of laboratory instruction during the second term of the Junior and all of the Senior year. This generally occupies from two to four hours a day on four days of each week. It includes dissections of various classes and orders of animals, with microscopic studies of the finer structures and of minute animal forms, as well as work in systematic Zoology.

Special courses of recitations or lectures on particular subjects are also given when desirable.

BOTANY—The scheme of instruction provides for three successive courses of study, as either ending the study for the ordinary student, or introducing it for one who desires to become a professional botanist.

The first or elementary course, which is required of all the Freshmen, is designed to teach the nature of the visible organs of flowering plants, tracing the life-history of vegetation from seed, through stem and root, leaves, branches, buds, blossoms, and fruit, to seed again. The method consists mainly in the use of some easy text-book, like Gray's Lessons, with whatever illustrations and explanations may be needed to secure the student's attention. The second course, coming the next year, is restricted to the sections in Biology, Natural History, Agriculture, and Selected studies, and is intended to enable the student to recognize the chief natural orders of native plants, with the ability to identify the common species. The class meets two or three times a week in spring and summer, and is practiced in identifying plants, using Gray's Manual as a standard, and employing the ordinary simple dissecting microscope. At this point the instruction for the Select Course ceases; in the next fall term the work for the courses in Biology, Natural History, and Agriculture is entirely practical, books being used only for reference. Students begin with cutting thin sections of some common woody and herbaceous stems, and are shown how to prepare such sections for examination and for permanent preservation as microscopic objects. After acquiring some facility in microscopic manipulation, various parts of flowering plants are brought in for dissection and examination, and towards the close of the term some attention is given to Ferns, Mosses, and Algae. This finishes the course for ordinary students; for those who may desire to prosecute the science professionally, the work is arranged to suit individual requirements, whether it be in the direction of Histology, or of Systematic Botany as applied to flowering plants, or to Ferns, Mosses, Hepatics, or Algae.

AGRICULTURE—The special instruction in the science of Agriculture is by recitations and lectures, with such aids and appliances as are suited to the class-room. Besides Agricultural Chemistry, it includes a discussion of the cultivation of the staple field crops of the country; theories of rural economy and systems of husbandry; the laws of heredity and principles of stock-breeding.

SANITARY SCIENCE—The lectures on this subject discuss the natural laws which govern the public health; their relation to the social habits and condition of communities; instruction in the use of mortuary statistics; epidemics and pestilences, with their relations to the prosperity of a community, and methods of control; the germ-theory of disease and theory of disinfectants; the hygiene of private dwellings and public buildings; the relations of the water supply to public health; sanitary engineering; legislation relating to public health and methods of official sanitary administration.

MATHEMATICS—The Mathematical studies of the Freshman year are pursued by all members of the class; those of the Junior year by students in the course of Engineering and properly qualified Special Students who may choose them. During the latter year, in connection with the instruction briefly indicated in the scheme above [p. 80], a course of familiar lectures is given to supplement the ordinary classroom exercises.

PHYSICS—The object of the experimental lectures is not only to elucidate the subjects treated in the text-book employed, but also to extend the treatment of such subjects, and to introduce others where thought desirable. A considerable portion of the work of the year is the preparation for recitation on matter thus presented.

At the end of the fall term, the Freshman class is redivided into three sections, according to capacity shown in the subjects of Chemistry and Physics. After this, although the experimental lectures are attended as before by the class as a whole, the higher divisions are able to pursue the studies more thoroughly.

The facilities of the Physical Laboratory are extended to such graduate students and Seniors as may desire them.

Course in Advanced Physics—A course of two lectures per week, beginning in January, is supplemented by laboratory work. The earlier portion of the time is devoted to the theory of observation and the method of least squares. The course is optional to all who have a command of the calculus.

MILITARY SCIENCE AND TACTICS—Instruction in this course is obligatory upon the whole Senior class in all departments. To secure familiarity with definitions and fundamental principles, a concise text-book is used for recitations and reference. The work is carried on chiefly by lectures, upon which satisfactory notes must be submitted. Such topics as the following are discussed: military economy; the American military problem; organization and reorganization; modern war on field and map; statistics and logistics; the combined use of "the three arms"; strategy and campaigning; orders of battle and grand tactics; special operations of war and field service; minor tactics and the art of war; use of cavalry in campaign and battle; use of artillery and the Franco-Prussian war; use of infantry and the Turko-Russian war; and finally a summary of "the Eastern Question." The course will terminate with an examination, and a special military certificate is awarded, by the Regular Army officer in charge of the department, to such students as attain a sufficient degree of proficiency, and give evidence of military aptitude. In connection with this course a brief original paper is required.

CIVIL ENGINEERING—The object of this course is to give a thorough preparation, first of all, in the principles of the various sciences involved, and afterwards, as extensive practice in the application of these principles as the time at disposal, the ability of the students, and the facilities and plant permit.

Under the first head are included such subjects as Mathematics, Physics, Mechanics, Thermodynamics, Astronomy, Geology, Mineralogy, Chemistry, and Botany; and under the second head, Drawing, Surveying, Strength and Properties of materials, and Design and Construction of various kinds, such as Bridges, Roofs, Foundations, Arches, Retaining Walls, Dams, Water Works, Railroads, Improvement of Rivers and Harbors, Sewerage and Drainage, Water Motors, etc.

The first division includes Civil Engineering as a Science, the other Civil Engineering as an Art. The ground covered by the first is definite, and the instruction is made as thorough as possible. The ground covered by the second is of almost indefinite extent. Here, by a careful selection of practical examples, such as occur in engineering practice, the application of principles is illustrated, and together with the analytical or algebraic methods, the student is also instructed in practical graphic solutions, wherever such solutions present a special value. Much time is devoted to geodetic operations and to surveying in the field. Instruction is given in the practical operations connected with the reconnaissance, location, and surveys of roads, canals, and railroads, such as setting out, cross-sectioning, setting grade stakes, calculation of earth work, etc. Thorough instruction is given in drawing and design, the construction of working drawings, and principles of designing as applied to bridges, roofs, etc.

The instruction is by means of practical exercises, lectures, and recitations, so combined as to develop as far as possible the mental powers of the student. Visits of inspection are made at suitable intervals to private and public works of engineering interest.

The entire course requires five years, three years of undergraduate and two of graduate instruction; and a Thesis of merit upon some approved subject, accompanied by designs and estimates, is required upon the completion of the course, as also at the end of the first three years. Examinations are also held at the end of every term and year.

In what follows, such details are given as may be of interest to those who contemplate taking the course.

Mathematics—6 hours weekly, Junior year, both terms. See Synopsis of Course.

French and German—Students in this course take in the Junior year the regular studies of the Junior class in both German and French, 3 hours each. In the Senior year, French is continued, 3 hours during the winter half-term.

Drawing and Descriptive Geometry—Drawing is begun at once in the first term of Freshman year, under the charge of the Professor of Drawing in the Art School, and includes practice in free hand drawing. In the second term, under the Instructor in Instrumental Drawing, the students take isometric drawing with application to drawing from models and structures by measurement, shading, tinting, conventional use of colors, principles of orthographic projections, and practice in making simple working drawings, 4 hours both terms.

The Drawing of Junior year, 3 hours both terms, includes Descriptive Geometry, the drawing of structures from measurement, and elements of design for simple structures. The instruction is by recitations, lectures, practical exercises and models, and is under the charge of the Instructor in Instrumental Drawing and the Professor and Instructor in Civil Engineering. Included in the work of this year is also the mapping of surveying field notes.

In the Senior year, the drawing consists of the mapping of the surveys of that year, and the designing of structures and finished drawings, designs and estimates, under the charge of the Professor and Instructor in Civil Engineering, 6 hours both terms.

Surveying and Field Engineering—The instruction in the field occupies about 20 hours for six or more weeks in both terms of Junior and Senior year. The exercises at these times are so arranged as to secure as much consecutive time as possible in the field. The work of the Junior year, includes the use and adjustments of instruments; practice surveys; recitations and lectures upon surveying operations and methods of keeping field notes. Levels are run, surveys made, plotted, and checked; blue print copies of drawings made, the use of compass, level, and transit acquired. In the second term of Junior year, land and topographical surveys are made and railroad curves run.

In the first term of Senior year, a line of railroad is located and set out from a contour map previously obtained, grades and curves established and set out, and computations made. The theory of the economic location is taught by lectures and recitations in connection with the field work. The work is arranged so that each student has sufficient practice in all the various operations. The text-books used are Gillespie and Johnson's works, Henck's Field Book, Gore's Elements of Geodesy, and Merriman's Theory of Least Squares. The course is under the charge of the Professor and Instructor in Civil Engineering, aided by several assistants.

Mechanics of Engineering—Senior year, 6 to 8 hours, both terms. The text-books of Weisbach, 1st and 2d volumes, are used in connection with lectures and solution of practical problems in illustration of the various topics. The course includes thorough instruction in the strength of materials, the stability of foundations, retaining walls, dams

and embankments, and masonry arches, by lectures and graphic methods. Questions of hydraulics, water supply, and measurement of discharge, receive attention, and the theory and construction of water motors. A course in Thermodynamics with application to air and steam engine is also included.

Construction and Design—Senior year, 6 hours both terms. A thorough course is given in the determination of stresses and the detailed design of roofs, bridges, etc., with working drawings, specifications, and estimates. Visits of inspection are made, and recitations and lectures held in connection with the work in the drawing room.

Astronomy—A course is given under the charge of the Professor of Astronomy, 6 hours, second term of Senior year, including practical work and the use of the sextant and transit in determining time, latitude, and azimuth.

Geology—This course occupies 3 hours up to the middle of the second term of Senior year.

Mineralogy—This course, under the Professor of Mineralogy, occupies three hours up to the middle of the second term in Senior year.

A course of lectures on the theory of electricity and its applications, by the Professor of Physics, is open to students in this department, and can be taken as a part of the preparation for a graduate course in the higher branches of electrical science.

MILITARY ENGINEERING—The object aimed at is to disseminate military information, and to awaken interest in the application of the arts of peace to those of possible war. In connection with the courses of Civil Engineering and Military Science, lectures will be given upon such topics as: systems of fortification; sea-coast defences; hasty intrenchments; passage of rivers and military bridges; military reconnaissance, and instruments; battlefield telemetry and methods; sea-coast range-finding, and ship-tracking devices; gunpowder and ballistic machines; high explosives and demolitions; gun metals, modern ordnance and gunnery; armor plates, turrets, projectiles and fuses; torpedoes, submarine mines, military electric installation and countermining.

MECHANICAL ENGINEERING—The objects aimed at in the plan of instruction in this course are, to give to the student a thorough training in elementary and advanced Mathematics and Physics, and their application to the Science of Construction; to make him familiar with the general principles of Engineering and with the practical details of mechanical construction through which these principles are made useful; and to enable him ultimately in beginning the work of his profession to bring to bear upon it a well balanced store of theoretical and practical knowledge, and a mind trained in correct habits of thought and work.

The complete course covers five years, three of which are spent in undergraduate study, and two in a graduate course, a portion of which may be spent in actual practical work. The subjects and methods of instruction in the undergraduate course are as follows:—

Mathematics—See synopsis, page 81.

French and German—Students take in the Junior year the regular studies of the Junior class in both French and German. In the Senior year, French is continued during the winter half-term.

Surveying—A short course in Surveying comprises lectures on methods of surveying and the construction and use of instruments, also practice in field work in the use of the level and transit, city surveying, establishing grades, and laying out buildings.

Shop Visiting divides the time equally with Drawing in the Junior year until the spring recess. The student, accompanied by the instructor, is employed in studying machinery in use and in process of construction in different machine shops in the city. He is required to make satisfactory, carefully dimensioned sketches, from measurements taken by himself, of the complete machines and their parts, and to describe the tools and mechanical operations used in producing the simpler pieces.

Drawing—Descriptive Geometry is taught in the drawing room by lectures and recitations, and by exercises at the drawing board, where the problems are solved graphically by the student. Instruction in drawing Machine Elements is given in the Junior year. Models and cartoons showing examples of approved practice are used by the instructor, who also gives personal attention to each student's work at the board as it progresses.

Principles of Mechanism—This is a course in theoretical and applied Kinematics. Instruction is by text-books and lectures illustrated by diagrams and models, an extensive collection of which belongs to the School and is accessible to the student.

Steam Engine—Recitations and lectures in this subject begin in the Junior year, after the spring recess. They relate to the structural details of engines and to the mechanical principles involved in their working. The subject is continued in the first term of Senior year, when particular attention is directed to various kinds of valve gear, the governor, the fly-wheel, balancing, and the effect of the weight of the reciprocating parts. In the second term of Senior year, the study of *Steam Boilers* takes the place of that of Engines.

Indicator Practice—In the Senior year, the student is afforded opportunities to apply the indicator to various engines in operation, and has practice in reading indicator cards and measuring them by the planimeter. He is taught to detect such defects in the engine as are shown by the cards.

Applied Mechanics—In this course lectures, recitations, and exercises in the solution of practical problems, relate to the topics specified under this head in scheme on page 81.

Thermodynamics—Recitations and lectures on the mechanical theory of heat and its application to hot-air engines, gas engines, and the steam engine.

Machine Design—The course in this subject consists chiefly in practical exercises at the drawing board, and partly in lectures on the functions of machines and the mechanical principles which are applied in determining the proportions of machinery. The student, under the guidance of an experienced instructor, is employed in making complete working drawings of machines, many examples of which are in the drawing rooms and the basements of the school. He does not copy the examples, but is required to change the dimensions and in many cases to alter the design, and is ultimately taught to make partly new designs of important machinery, such as cranes, yacht engines, machine tools, boilers, etc. The discipline the student receives is such as he would obtain in the drawing office of an engineering establishment, while he is also carefully instructed in the theory of the subjects he deals with, and in the practical bearing of all his work.

In the Senior year, several excursions are made by the class, accompanied by one or more instructors, to neighboring manufacturing and engineering centers, where large manufactories, pumping works, ocean steamers, etc., are visited. Full notes must be taken, and a satisfactory written report upon the machinery examined is required of the student.

Thesis—Before graduating, the student must present a satisfactory thesis on some subject approved by the professor in charge of the department of Mechanical Engineering.

A course of lectures on the theory of Electricity and its applications is open to students in this department, and these lectures can be taken as a part of the preparation for a graduate course in the higher branches of electrical science.

ASTRONOMY—Students in the Select Course receive instruction in Astronomy during Junior year, first term, four hours per week.

Students of Civil Engineering during the second term of their Senior year have six recitations per week, and also practical experience in the determinations of time, azimuths, latitude, longitude, etc.

ENGLISH—The course is designed to give the student acquaintance with the great representative writers of the various epochs. A history of the language is one of the studies of the Freshman year; and after that year the study of the language is made entirely subordinate to that of the literature. During first term of Junior year, however, extracts from Early English authors are read, and Early English grammar studied, so as to familiarize the student with the inflections then in use

and the distinctions existing between the leading dialects. It is the aim of this term's work to give such knowledge of forms, and to some extent of words, that the student will be able to read at sight any Early English author whose writings do not involve special difficulties of language or vocabulary.

With the second term, the regular study of English literature proper begins with Chaucer; and for the rest of the course till the end of Senior year the following authors are read: Bacon, Shakspeare, Milton, Dryden, Pope, Gray, Goldsmith, and later writers. Those mentioned in the lists are always studied, but other authors not named are also taken up, the course varying somewhat in different years. In all cases, complete works of a writer are studied, not extracts; as, for instance, several of Chaucer's Tales, and several of the plays of Shakspeare. The authors are taken up in chronological order, and the literary history of the time is likewise carried on in connection with the great representative writers of each period.

GERMAN—The aim in this department is to give such a knowledge of facts and principles as shall qualify the student as rapidly as possible to use the language for such various purposes as his special needs may require, and particularly to facilitate the use of German treatises in his later special studies. To accomplish this, the course consists of the combination of the study of systematic German grammar with a complementary and progressive course of oral translation from English into German, the latter being designed for the double purpose of increasing the command of grammatical principles, and through the establishment of a habit of ready and accurate expression, of laying the foundation for future colloquial use of the language. In connection with the foregoing, it is attempted to introduce the student to as many different styles and as many forms of composition as the time allows. For this purpose the reading matter is in general selected from readers and collections prepared for the use of schools in Germany, and characterized by the number and variety of their extracts, thus enabling the instructor to select pieces that illustrate one another and to avoid similar lines of reading with successive classes. Constant attention is paid during a portion of the course to English affinities, to analogies in the formation of English and German abstract terms, to the commoner rhetorical resemblances and differences, to the details of arrangement in German sentences, and the development of secondary from primary significations of words.

In view of the shortness of the course there is no attempt to secure any considerable acquaintance with German literature. A body of representative pieces of lyric poetry, however, is made the basis of careful literary study, with special attention to poetic diction and variety of metrical form. Memorizing German poems is practiced to some extent as a class exercise, as also retranslation of dictated literal versions of

simple pieces into German verse, in accordance with prescribed rhythm and sequence of rhyme.

Occasionally, when the proficiency of a class allows it, an advanced division is organized, which is thus enabled to read a much larger amount of matter and to pursue more critical methods. The attention of such a division is sometimes given for a few months to extracts treating of leading events in German history, with a collateral course of German historical poetry, the selections being made so as to be mutually illustrative. Historical poems not contained in the text-books are often furnished by dictation.

During the last few weeks of the course, there is an attempt to initiate the student into the art of rapid and intelligent, though uncritical reading, dispensing largely with dictionary and grammar and aiming to form independent habits of observation and induction. For this purpose recourse is had to entertaining novels.

In general, it is the endeavor, while aiming primarily and constantly at acquiring a working knowledge of contemporary German, to combine habitually scientific and empirical methods, to enforce correct notions as to the nature of language, to secure incidentally some of the most important disciplinary results of elementary linguistic study, and to give some conception, by suggestive questions and occasional statements, of the various special directions which a more extended and advanced course would necessarily take.

The time allotted to the subject is three hours a week during the Freshman and Junior years.

Regular text-books: Whitney's German Grammar, Whitney's German Dictionary; Ahn's Exercises, or Eysenbach's German Exercises.

FRENCH—To avoid repetition, it will suffice to state that much the same course is pursued in French as is above detailed for the German, and on like principles. The three weekly exercises extend through the entire Junior, and most of the Senior year, based on a systematic review of the essential elements. In the Junior year, a wide extent of reading is insisted on, beginning with the simpler novels, such as "Le Conscriit," "L'Ami Fritz," "La Petite Fadette," etc., through a scale of diversified vocabulary by which at last sight-reading of such matter as is more appropriate to the department may be profitably entertained. The practical or conversational course runs along parallel with the more systematic study of the language.

In the second year, the aim is to familiarize the student with practical terms and expressions of a scientific cast, rather than with the purely literary language. Hence practical works, such as books of travel and scientific treatises, have seemed best adapted to the general object in view.

HISTORY—The greater part of the work is carried on by means of recitations, Green's Short History of the English People being used as a text-book. The students are also required to look up special topics, and to give the results of their studies to the class: the books used for this purpose are drawn from a small historical library in the class-room. The location of places is enforced by the use of outline maps which the students are required to fill in. Particular attention is given to the history of institutions and to the constitutional and economic growth of the country.

POLITICAL ECONOMY—In the beginning of the course, an effort is made to familiarize the students with the fundamental principles of Economics, and more particularly to train them in economic reasoning. More difficult problems are then taken up and discussed, and special topics are assigned to the class for investigation. A small library, containing a number of copies of each of the principal authorities, has been provided, in order that the students may be able to familiarize themselves somewhat with the literature of the subject, without expense to themselves.

THE TERMS AND VACATIONS correspond with those of the College. (See Calendar, p. 6.)

EXPENSES—The charge for tuition for undergraduate students is \$150 per year, payable \$55 at the beginning of the first and second terms, and \$40 at the middle of the second term. An additional charge of \$5 a year is made to each student for the use of the College Reading Room and Gymnasium, which is payable at the beginning of the first term, making the total charge for that term \$60. The student in the Chemical course has an additional charge of \$60 per annum for chemicals and use of apparatus. He also supplies himself at his own expense with flasks, crucibles, etc., the cost of which should not exceed \$10 per term. A fee of \$5 is charged to members of the Freshman Class for chemicals and materials used in their laboratory practice, and the same fee is required from all (except Chemical students) who take practical exercises in Blowpipe Analysis and Determinative Mineralogy. A fee of \$5 a term is also charged to students in the Zoological and Anatomical Laboratories, for materials and use of instruments.

For the graduate students the charge for tuition is one hundred dollars per year.

THE FEE FOR GRADUATION in the case of BACHELORS OF PHILOSOPHY is ten dollars, unless the person taking the degree is also a graduate of the College, when the fee is but five dollars.

SCHOLARSHIPS

STATE SCHOLARSHIPS—By an Act passed in 1863, the General Assembly of Connecticut established certain scholarships from the income of the fund derived from the National Grant of July, 1862, for the promotion of scientific education. There are now about twenty-three of these scholarships (the number depending upon the income of the fund), designed to aid by free tuition young men fitting themselves more especially for pursuits in agriculture, manufacturing, and engineering.

The applicants must be citizens of Connecticut. The appointing board consists of the Board of State Visitors (see p. 75) and the Secretary of the School; it meets on the Tuesday before Commencement (viz.: on June 24, 1890), to fill the vacancies for the next University year. Applications should be made, previous to that date, to Professor George J. Brush, Secretary of the appointing Board.

THE HOLMES SCHOLARSHIP, founded by Samuel Holmes, Esq., amounts to \$60 per year. The recipient must be a citizen of Middlebury, Prospect, Waterbury, or Wolcott, Connecticut; the appointments are made by the Board of Agents of the Bronson Library in Waterbury.

DEGREES

THE DEGREE OF BACHELOR OF PHILOSOPHY is conferred on those who have completed one of the three-year courses, and have passed the examination at its close.

CIVIL ENGINEER AND DYNAMIC OR MECHANICAL ENGINEER—see page 104.

DOCTOR OF PHILOSOPHY—see page 103.

COURSES OF GRADUATE INSTRUCTION

FACULTY

- REV. TIMOTHY DWIGHT, D.D., LL.D., PRESIDENT
REV. NOAH PORTER, D.D., LL.D., *Professor of Moral Philosophy and Metaphysics*
JAMES D. DANA, PH.D., LL.D., *Professor of Geology and Mineralogy*
CHESTER S. LYMAN, M.A., *Professor of Astronomy, Emeritus*
REV. JAMES M. HOPPIN, D.D., *Professor of the History of Art*
EDWARD J. PHELPS, LL.D., *Professor of Law*
WILLIAM D. WHITNEY, PH.D., LL.D., *Professor of Sanskrit and Comparative Philology*
HUBERT A. NEWTON, LL.D., *Secretary, and Professor of Mathematics*
GEORGE J. BRUSH, LL.D., *Professor of Mineralogy*
SAMUEL W. JOHNSON, M.A., *Professor of Theoretical and Analytical Chemistry*
WILLIAM H. BREWER, PH.D., *Professor of Agriculture*
JOHN E. CLARK, M.A., *Professor of Mathematics*
DANIEL C. EATON, M.A., *Professor of Botany*
ARTHUR M. WHEELER, M.A., *Professor of History*
JOHN F. WEIR, N.A., M.A., *Professor of Painting*
ADDISON VANNAME, M.A., *Instructor in Japanese*
J. WILLARD GIBBS, PH.D., *Professor of Mathematical Physics*
CHARLES B. RICHARDS, M.A., *Professor of Mechanical Engineering*
ARTHUR W. WRIGHT, PH.D., *Professor of Experimental Physics*
THOMAS R. LOUNSBURY, M.A., *Professor of English*
OTHNIEL C. MARSH, PH.D., LL.D., *Professor of Palaeontology*
WILLIAM I. KNAPP, PH.D., LL.D., *Professor of Modern Languages*
JOHN H. NIEMEYER, M.A., *Professor of Drawing*
TRACY PECK, M.A., *Professor of Latin*
ADDISON E. VERRILL, M.A., *Professor of Zoology*
WILLIAM G. SUMNER, LL.D., *Professor of Political and Social Science*
REV. GEORGE T. LADD, D.D., *Professor of Mental and Moral Philosophy*

SIDNEY I. SMITH, M.A., *Professor of Comparative Anatomy*
WILLIAM G. MIXTER, M.A., *Professor of Chemistry*
HENRY P. WRIGHT, PH.D., *Professor of Latin*
HENRY A. BEERS, M.A., *Professor of English Literature*
A. JAY DUBOIS, PH.D., *Professor of Civil Engineering*
EDWARD S. DANA, PH.D., *Assistant Professor of Natural Philosophy*
THOMAS D. SEYMOUR, M.A., *Professor of Greek*
CHARLES S. HASTINGS, PH.D., *Professor of Physics*
WILLIAM R. HARPER, PH.D., *Professor of the Semitic Languages*
FRANK A. GOOCH, PH.D., *Professor of Chemistry*
ALBERT S. COOK, PH.D., L.H.D., *Professor of English*
GEORGE B. ADAMS, PH.D., *Professor of American History*
HENRY W. FARNAM, R.P.D., *Professor of Political Economy*
RUSSELL H. CHITTENDEN, PH.D., *Professor of Physiological Chemistry*
ARTHUR T. HADLEY, M.A., *Professor of Political Science*

OTHER INSTRUCTORS

REV. SAMUEL HARRIS, D.D., LL.D., *Professor of Systematic Theology*
REV. GEORGE P. FISHER, D.D., LL.D., *Professor of Ecclesiastical History*
WILLIAM C. ROBINSON, LL.D., *Professor of Law*
SIMEON E. BALDWIN, M.A., *Professor of Comparative Jurisprudence*
JOHNSON T. PLATT, M.A., *Professor of General Jurisprudence*
FREDERIC R. HONEY, PH.B., *Instructor in Perspective*
JOHN P. C. FOSTER, M.D., *Instructor in Anatomy*
WILLIAM T. STRONG, M.A., *Instructor in German*
SAMUEL L. PENFIELD, PH.B., *Assistant Professor of Mineralogy*
HORACE L. WELLS, PH.B., *Assistant Professor of Analytical Chemistry*
EDWARD V. RAYNOLDS, D.C.L., *Lecturer on Roman and Constitutional Law*
FRANK P. GOODRICH, M.A., *Instructor in German*
GEORGE S. GOODSPEED, M.A., *Assistant in the Semitic Languages*
HENRY C. WHITE, M.L., *Lecturer on Local Government*
ELIAS H. SNEATH, B.A., B.D., *Lecturer on the History of Philosophy*
ROBERT F. HARPER, PH.D., *Instructor in the Semitic Languages*
FRANK K. SANDERS, PH.D., *Assistant in the Semitic Languages*
CLARK E. CRANDALL, M.A., *Assistant in the Semitic Languages*
GUSTAVE F. GRUENER, B.A., *Tutor in German*

The instruction of graduates, independently of the courses of study provided in the professional schools, had been attempted in an informal way before 1847, when such courses were definitely arranged, and the Department of Philosophy and the Arts constituted, with this object in view. The degrees of Doctor of Philosophy and Civil Engineer were first offered in 1860, that of Dynamical or Mechanical Engineer in 1873, and that of Master of Arts (previously given without evidence of study) in 1874.

Graduates of this and other Colleges and Universities, and (in exceptional cases, by special permission) other persons of liberal education, who are not less than eighteen years old, are received as students for longer or shorter periods, with or without reference to the attainment of a degree.

An Executive Committee has a general oversight of the students in this Department. The Committee this year is composed of Professors WHITNEY, NEWTON, BRUSH, WHEELER, HARPER, and HADLEY. They receive the names of applicants for instruction, and judge and approve the courses of study proposed; and information may be obtained from them as to conditions, terms, etc. Students may also make special arrangements with any instructor according to their mutual convenience.

Instruction is given partly by lectures, partly by recitations and by oral and written discussions, partly by directing courses of reading, and partly by work in the laboratories and with instruments. There are also various voluntary associations, in which instructors and students meet together periodically for the reading of papers, oral discussions, etc.; such are, the Classical and Philological Society, the Mathematical Club, the Political Science Club, the Philosophical Club, the Semitic Club, etc.

The terms and vacations correspond with those in the Undergraduate Departments. (See Calendar, p. 6.)

The fee for instruction is generally one hundred dollars; but may be more, or less, according to the course pursued and the amount of instruction received. Students have the free use of the Library of the University (including the

Linonian and Brothers Library); and are admitted to the College Reading Room on payment of an annual fee of two dollars.

THE DEGREE OF DOCTOR OF PHILOSOPHY is conferred upon those who, after having taken a Bachelor's degree (implying a course of undergraduate study equivalent to that pursued in the Academical Department), and having studied in this Department for not less than two years, shall have passed a satisfactory final examination and presented a thesis giving evidence of high attainment in the branches of knowledge pursued. The thesis must be deposited at the Library for public inspection, not later than June 1. The degree is not given, upon examination, to those whose studies are pursued elsewhere. The requirements for a degree will in some cases exact of the student more than two years of labor; especially when the course of undergraduate study has been less than four years. A good knowledge of Latin, German, and French, will be required in all cases, unless, for some very exceptional reason, the candidate be excused by the Faculty. The fee for graduation is ten dollars.

THE DEGREE OF MASTER OF ARTS is conferred on Bachelors of Arts of Yale College or of other Colleges, of two years' standing or upwards, who have given to the Faculty of the Academical Department evidence of having made satisfactory progress in liberal studies after receiving their first degree. Such evidence may be furnished by one year's systematic study (not professional) in New Haven, under the direction of the Academical Faculty, followed by an examination. Graduates of other Colleges can obtain the degree only by residence as thus described.

Such Bachelors of Arts of *Yale College* as may not choose to reside at the College for the prosecution of study may show at any time, not less than three years after graduation,

by their printed essays, or by submitting to special examinations, that they have spent a year in liberal (and non-professional) study, and are worthy of recommendation for this degree.

A committee of the Faculty is appointed (consisting for the present year, of Professors NEWTON and WHEELER), to whom candidates for this degree must submit their proposed courses of study for approval by the first of November in each year; and the evidence of a year's study must be submitted to the same committee by the first of June.

In the case of resident students, the charge for instruction will usually be one hundred dollars, with a fee of ten dollars for the degree. In the case of non-residents, the fee for examinations and the degree will usually be twenty-five dollars.

THE DEGREES OF CIVIL ENGINEER AND MECHANICAL (OR DYNAMICAL) ENGINEER are conferred on Bachelors of Philosophy who have taken the first degree in Engineering study, and who pursue a higher course under the direction of the Governing Board of the Sheffield Scientific School, for at least two years, sustaining a final examination, and giving evidence of their ability to design important constructions and to make the requisite drawings and calculations. The fee for graduation is five dollars.

The Courses of Instruction may be grouped as follows:

I. PSYCHOLOGY; ETHICS; PHILOSOPHY

Ex-President PORTER :—*Philosophy; Ethics*. This course includes readings in Locke, Hume, Herbert Spencer, etc., as criticized by Professor T. H. Green (Works, vols. 1 and 2): two hours through the year.

The undergraduate course in Ethics (p. 37) is also open to graduate students.

Professor LADD :—I. *Philosophy of Religion*. A course of lectures considering, from the philosophical point of view, the arguments for the

Being of God, the Predicates and Attributes of God, Nature and the Supernatural, Revelation, Inspiration, Miracles, and the practical Life of Religion : one hour through the year.

2. *Philosophy*. The reading, with lectures, and papers and discussions by the class, of Hartmann's *Philosophy of the Unconscious*, and Janet's *Final Causes* : two hours through the year.

3. *Metaphysics and Theory of Knowledge*. This course is designed for the most advanced students ; it will comprise a careful study of Lotze's larger and more technical works : I. Logic ; II. Metaphysics : one hour through the year.

Professor Ladd's undergraduate courses (p. 37) are also open to graduate students.

Professor HARRIS :—1. *The Philosophical Basis of Theism and the Self-Revelation of God*. This course of instruction for the Junior class of the Divinity School, is open to graduate students on applying to the Professor.

2. The course designed for graduate students of the Divinity School, for the free discussion of topics in *Systematic Theology*, is also open to graduate students of philosophy, on applying to the Professor.

Mr. DUNCAN's undergraduate courses in *Advanced Logic* (one hour a week, through the year) and in the *History of Modern Philosophy* (two hours a week, through the year), are open to graduate students.

Mr. SNEATH lectures on the *Rise and Development of the Scottish Philosophy* : two hours a week through the year.

II. POLITICAL AND SOCIAL SCIENCE ; HISTORY ; LAW

Professor SUMNER :—1. *Finance and Politics in the History of the United States* ; two hours a week through the year. This course deals with the history of the United States as a field for the study of currency, banking, tariff, public finance, the history of political economy, the art of politics, the science and art of government, and industrial history. It occupies two years. In 1889-90 the first part, down to 1830, will be given. It is assumed that those who attend this course have a good knowledge of the civil history of the United States.

2. *The Industrial Organization of Society* ; two hours a week through the year. This course is given every other year, alternately with course

3. It will not be given in 1889-90.

3. *Anthropology* ; two hours a week through the year. This course takes up the study of anthropology, sociology, archaeology, ethnology, and human palaeontology. The text-books of the course are Ratzel's *Völkerrunde*, Lippert's *Kulturgeschichte*, Ranke's *Der Mensch*. Members of the class use English, French, or German text-books, according to the convenience of each. There are text-book lessons, illustrative lectures, and detailed study of special topics.

4. *The Logic and Method of the Social Sciences.* A short course of lectures on the classification of the social sciences and their relation to each other: also on their relation to history and law, on the most important current fallacies in social science, and on existing controversies about method, especially in political economy.

[Candidates for a degree are required to pursue, and to be examined, on a course of reading in the leading textbooks of Political Economy, which will be prescribed by Professor Sumner for each student upon consultation.]

Professor FARNAM:—1. *The Principles of Public Finance*; two hours a week through the second term. A systematic survey of the means by which the expenditures of government are met, regard being had both to the economic principles involved and to the fiscal systems of modern states. Leading topics are: the budget, taxation (national and local), public debts, and state banks considered as aids to public credit.

2. *The History of Labor Organizations*; one hour a week during the first term. A brief account of societies of artisans from the origin of the guild system to the present time, showing their relation to the mechanical arts on the one hand and to the governmental control of industry on the other.

Professor HADLEY:—1. *Corporations*; two hours a week during the first term. The history of corporate ownership: its effects upon labor, prices, and profits, with the legislation of different states and countries on these subjects; the limits of public and private activity in corporate business.

2. *Railroad Administration*; two hours a week during the second term. This course deals with railroad expenditures and receipts, the methods of railroad accounting, railroad rates and discrimination and their effects upon the community, the various methods of legislative control and their results.

3. *History of Economic Science*; one hour a week during the first term. With special reference to its development in the nineteenth century.

Mr. RAYNOLDS:—1. *Roman Law*; one hour a week through the year. An elementary course in the History and Institutes of Roman Law and its relation to modern Codes.

2. *Constitutional History of Recent Times*; two hours a week during the first term. This course deals mainly with the chief States of Continental Europe since 1789, and is introductory to the following course.

3. *Comparative Constitutional Law*; two hours a week during the second term. A comparative study of the modern constitutional

state, especially with regard to the principal forms of constitutional government, the constitution, powers and relations of the governmental department, and the laws and practices of elections in the various states.

Mr. WHITE:—*Local Government in the United States*; one hour a week during the first term. This course treats of the development and present status of the institutions of local government in this country, giving special attention to the government of cities.

Professor BREWER:—*Physical Geography in its relations to Political History*. A course of about ten lectures, during the first term, discussing the following topics: 1. The physical relations of man to the region he inhabits; 2. The physical conditions and natural productions necessary for civilization; 3. Natural aids to the defence and protection of communities; 4. Natural facilities for commerce; 5. The effects of natural conditions as now modified by modern inventions.

Professor WHEELER:—*English History*; two hours a week through the year. This course covers two years. The object is to trace carefully the long, continuous, and, on the whole, orderly development of English political institutions. Special topics are assigned, and the best sources of information indicated. Particular attention is devoted to the early and medieval periods, and for these the work of Bishop Stubbs will be the leading authority.

Professor ADAMS:—*The Formation of the American Union*; one hour a week through the year. The course traces in colonial times the growth of the idea of union and the influence of the Revolution in this direction; somewhat more in detail the formation and adoption of the constitution, and since 1789 the growth on the one hand of a stronger union sentiment and on the other of the doctrine of secession.

III. PHILOLOGY; LITERATURE

Professor WHITNEY:—1. *Sanskrit*; four hours a week through the year. A first year's instruction in Sanskrit, beginning with the instructor's Sanskrit Grammar, and passing on to Lanman's Reader. A sketch of Sanskrit Literature is given in connection with the exercises during the latter part of the year.

2. *Linguistics*; one hour a week during the second term. A series of exercises—mingled lecture, recitation, and discussion—on the leading topics of the general study of language, following and using as text-book the instructor's *Life and Growth of Language*, is given if a class of six or more is formed.

Professor WILLIAM R. HARPER, assisted by Mr. ROBERT F. HARPER, Mr. CRANDALL, Mr. GOODSPEED, and Mr. SANDERS:—1. *Hebrew and the Old Testament*:—

(1.) *Genesis, i-viii*, including (a) the grammatical principles of the language; (b) acquisition of a vocabulary; (c) translation of English into Hebrew: five hours a week, first term.

(2.) *Deuteronomy*, critical translation with (a) review of grammar; (b) study of accents; (c) special exercises in Hebrew prose composition; (d) special study of the principal points of syntax; (e) principles of Hebrew poetry: four hours a week, second term.

(3.) *Hexateuchal Analysis*, (a) translation and comparison of the several documents of which the Hexateuch is composed, (b) an examination of the grounds on which the analysis rests: two hours a week, second term.

(4.) *Hosea, Zechariah*, a textual, grammatical, exegetical and historical study: two hours a week, both terms.

(5.) *Old Testament Prophetic Literature*, including (a) critical study of selected prophetic passages; (b) the growth and development of prophecy in the various periods of Hebrew history; (c) the study of prophetic life and methods, prophetic politics, prophetic historiography, prophetic ethics and theology; (d) a comparison of Old Testament prophetic literature with the corresponding literature of other nations: two hours a week, both terms.

[Those who take this course will be expected to pass examination on all the prophetic books.]

(6.) *Old Testament Prophetic Literature*, same as course 5, except that a knowledge of Hebrew is not required: two hours a week, both terms.

(7.) *The Origin and Contents of the Hebrew Psalter*; University lectures; one hour a week.

(8.) *Hebrew Readings*: (a) in Kings and Chronicles, two hours a week, first term, Mr. Crandall; (b) Isaiah xl-lxvi, two hours a week, second term, Mr. Crandall; (c) in Joshua, Judges, Samuel, three hours a week, second term (in two sections); Mr. Robert F. Harper, and Mr. Sanders.

(9.) *The Book of Judges*; translation, and interpretation with discussion of the text, literary form, and historical contents, six lectures, second term; Mr. Sanders.

(10.) *The Books of Ezra and Nehemiah*: translation and interpretation with discussion of the text, literary form, and historical contents, six lectures, second term; Mr. Goodspeed.

(11.) *The Books of Kings*: translation and discussion in connection with the literature of the cuneiform inscriptions, two hours a week, second term; Mr. Robert F. Harper.

2. *Assyrian and Babylonian* :—

(1.) *Assyrian for Beginners*, including (a) the grammatical principles; (b) study of cuneiform text in Lyon's Assyrian Manual; (c) rapid reading of transliterated texts in same: two hours a week, first term.

(2.) *Sennacherib Taylor*, (I. R. 39-42): one hour a week, second term.

(3.) *Assyrian Creation Account, Deluge Account*, etc., Delitzsch's *Assyrische Lesestücke*, pp. 93-110; with study of Assyrian and Babylonian religion: one hour a week, second term.

(4.) *Sargon* (Lyon's *Sargonstexte*), one hour a week, second term; Mr. Robert F. Harper.

(5.) *Nebuchadnezzar East India House* (I R. 53-58 [59-64]), two hours a week, first term; Mr. Robert F. Harper.

(6.) *New Babylonian inscriptions*, with study of later Assyrian and Babylonian history, two hours a week, second term; Mr. Robert F. Harper.

(7.) *Esarhaddon, cylinder A.* (I. R. 45-47), with special discussion of the text, one hour a week, first term: Mr. Robert F. Harper.

3. *Arabic, Aramaic, and Ethiopic.*

(1.) *Arabic for Beginners*, including (a) the grammatical principles; (b) translation of Genesis i-iii, and selections from the Kuran, two hours a week, first term; Mr. Sanders.

(2.) *Kuran*. Suras written during the sixth to the tenth years of Mohammed's ministry, 67, 53, 32, 39, 73, 79, 54, 34, 31, 69, 68, 41, 71, 52, etc., twenty-two in all, with special reference to the Scripture material and the Rabbinical, and Arabic legends found in the Kuran, two hours a week, first term; one hour a week, second term.

(3.) *Kuran*. Suras written during the early years of Mohammed's ministry, with special study of Arabic syntax, one hour a week, second term.

(4.) *Arabic Bible*. Sight-reading in historical books, one hour a week, second term; Mr. Sanders.

(5.) *Arabic Poets and Historians*. Using Arnold's *Chrestomathy*, one hour a week, second term; Mr. Robert F. Harper.

(6.) *Syriac*. Using Nestle's *Syriac Grammar*, two hours a week, second term.

(7.) *Ethiopic*, principles of grammar and translation in "Liber Baruch" and "Carmina," Dillmann's *Chrestomathia Ethiopica*, one hour a week through the year.

(8.) *Comparative Semitic Grammar*. Lectures based upon a comparison of the text of Genesis i-iii in Hebrew, Arabic, Aramaic, Syriac, Ethiopic, with references to the corresponding forms in Assyrian, one hour a week through the year.

Mr. VANNAME:—Elements of the Japanese language, and exercises in the reading of both transliterated and native text. One or two hours a week, both terms.

Professor SEYMOUR:—*Greek*: I. *Greek Drama*. Important plays of each of the three great tragic poets are read, and one or more plays of Aristophanes: three hours a week through the year.

2. *Greek Historians.* The Annalists, Herodotus, and Thucydides. Two hours a week through the year.

The undergraduate elective courses in Greek (pp. 45, 46) are open also to graduate students.

Professor PECK:—*Latin.* 1. *Livy.* Two hours a week during the first half-year.

2. *Terence.* Two hours a week during the second half-year.

3. *Latin Composition.* One hour a week through the year.

In connection with all these courses special topics are assigned for investigation and discussion, as, the Latinity and literary canons of the different authors and periods, the rationale of constructions, historical syntax, pronunciation, etymology, etc.

The undergraduate elective courses in Latin (pp. 44, 45) are open also to graduate students.

Professor BEERS:—1. *Anglo-Saxon Poetry*; one hour a week through the year. This course is limited to students who have some elementary knowledge of Anglo-Saxon. The texts selected for reading in the year 1889-90 are, Caedmon's Exodus (Hunt's edition), Andreas (Baskervill's edition), Beowulf (Harrison's edition), and Judith (Cook's edition). Sievers' Grammar is used and reference made to Earle's Anglo-Saxon Literature.

2. *English Literature.* Graduate instruction in this subject has been given by the assignment of reading courses to individual students according to their several requirements. They have been called upon to keep full notes of their reading, and to submit these from time to time to the instructor. For the year 1889-90, it is proposed to form such students into a class meeting regularly once a week, provided there is a large enough number to warrant the formation of such a class. In that case the subject of study for the year will be Milton and his contemporaries (1625-1674).

The undergraduate courses in English (pp. 42, 43) are also open to graduate students.

Professor COOK:—1. *Old English Poetry.* One hour a week, first term. This course will be limited to students who have a reading knowledge of German, and an elementary acquaintance with Old English. The texts used will be Judith (Cook's edition), Elene (Kent's edition), and The Battle of Maldon (Sweet's Reader). These will be read, their place in the literature examined, and questions of authorship, date, and textual criticism discussed. Ten Brink's and Wülker's Histories of Old English Literature will be constantly used for reference.

2. *Old English Grammar.* One hour a week, second term. The requirements for admission to this course are the same as for Course 1. An exhaustive grammatical examination of some prose text will be made, on the basis of Cook's Phonological Investigation of Old

English and edition of Sievers' Grammar for Phonology, of the latter for Inflection, and of March's Grammar for Syntax.

3. *Historical English Prosody*. One hour a week, first term. Requirements for admission the same as for Course 1. Schipper's *Englische Metrik* will be adopted as the basis of study, but reference will be made to the discrepant views of other authorities.

4. *Middle English Grammar*. One hour a week, second term. Requirements for admission the same as for Course 1. An outline of Middle English Phonology and Inflection will be given by means of lectures, and the knowledge thus gained will be applied in a grammatical study of Chaucer, on the basis of Ten Brink's *Chaucer's Sprache und Verskunst*.

The undergraduate courses in the English Language and Literature (p. 43) are also open to graduate students.

Professor KNAPP:—*Spanish ; Italian ; Old French and Provençal (including Catalan, ancient and modern)*.

The undergraduate courses in French, Spanish, and Italian (pp. 41, 42) are also open to graduate students.

Mr. STRONG, Mr. GOODRICH, and Mr. GRUENER:—*German*. The elective courses offered to undergraduates (p. 42) are also open to graduate students.

IV. MATHEMATICS.

Professor NEWTON:—*Analytical Statics ; The Dynamics of a Particle and of a System of Particles.*

The Mathematical Theories of Shooting Stars and Meteors, and the Treatment of Observations of them ; The Lunar and Planetary Theories.

Higher Geometry.

Professor CLARK:—*Determinants, with applications.*

Theory of Curves and Surfaces.

Definite Integrals ; Differential Equations.

The Kinematics of a Rigid Body.

Professor GIBBS:—*Vector Analysis*, with special reference to physical applications.

Theory of the Potential, and allied topics.

Mathematical Theory of Electricity and Magnetism.

Electro-magnetic Theory of Light. Propagation of the electrical disturbance in isotropic and aeolotropic media. Reflection at a surface where two such media meet. Dispersion of colors.

A short course on *the a priori Deduction of Thermodynamic Principles from the Theory of Probabilities*.

Graduates will also in many cases find it profitable to take some of the mathematical courses offered to the undergraduates. (Cf. p. 48.)

V. PHYSICS; CHEMISTRY

Professor A. W. WRIGHT :—*Experimental Physics*. Direction of practical work in the Sloane Physical Laboratory, with instruction in the principles and methods of physical investigation, the processes and instruments of measurement, and the methods of computing and reducing results of observations. Special attention is paid to practical measurements in electricity and magnetism.

The student is expected to make original investigations an important part of his work, and has the free use of the laboratory facilities for carrying them on.

Professor HASTINGS :—A course in *Physics* will consist of laboratory work, supplemented by lectures on the theory of observation, with the method of least squares, and, each year, some special department of physics will be selected for detailed treatment in a course of lectures and conferences. Lectures on the theory of electricity and electrical instruments occupy six months. The use of the laboratory is at the command of the student at all times.

Professor GOOCH :—*Experimental and Analytical Chemistry*. The courses in experimental chemistry (inorganic or organic) and in analytical chemistry (qualitative and quantitative) offered to undergraduates (p. 48) are open also to graduates. In addition, the facilities of the Kent Laboratory and opportunities to engage in special lines of investigation are placed at the disposal of graduate students who are sufficiently advanced to undertake such higher work.

Professor JOHNSON :—*Organic Chemistry*: Paraffines and their derivations, two hours weekly throughout the year; Aromatic Compounds, two hours a week during the first term. Systematic review of the various classes of carbon compounds, with study of substances that illustrate current chemical doctrines or are important in nature and in the arts. Experimental demonstrations.

Professor WELLS :—*Analytical Chemistry*; including a systematic course in Qualitative Analysis, a systematic course in Quantitative Analysis, and such special branches of Quantitative Analysis as are applied to Mineralogy and various departments of Metallurgy.

Instruction in analytical processes and chemical principles involved in them, is given to each student separately in the laboratory. Laboratories are open seven hours daily (except Saturdays).

Professor CHITTENDEN :—*Physiological Chemistry*. Graduate students having sufficient knowledge of analytical chemistry and physiology are received into the Sheffield Biological Laboratory at the beginning of the academic year, where they can pursue a course in physiological chemistry and toxicology, extending throughout the entire year. The course necessitates, on an average, four hours of laboratory work per day, and attendance on lectures and recitations three or four times

per week. Opportunities are also afforded for the carrying on of original investigations, either in physiological chemistry or experimental toxicology, and to students qualified for such work the laboratory is open during the entire day.

Students desirous of studying any special subject in physiological chemistry and having but a limited amount of time are also received, provided they are qualified by previous work to pursue the study advantageously.

VI. GEOLOGY; NATURAL HISTORY

Professor J. D. DANA :—*Geology*. The subjects taught in the course are Physiographic and Lithological Geology, with Historical and Dynamical Geology in alternate years; and for an advanced elective, the reading and discussion of original memoirs and other publications in all these departments, together with work in the field. For practical illustrations of the various subjects, the instruction is supplemented by excursions to regions, severally, of sedimentary, metamorphic, and igneous rocks; of variously flexed, jointed, altered and degraded rocks; of seashore action and its results; of glacial, fluvial, and other Quaternary phenomena; excellent localities for the study of these various subjects are found in the vicinity of New Haven, but excursions extend also to neighboring parts of New England and New York.

Professors BRUSH, E. S. DANA, and PENFIELD :—*Mineralogy*, in its different branches: (1) Descriptive Mineralogy: including the study of mineral species individually and in their relations to each other in composition, association, and so on. (2) Crystallography and Optical Mineralogy: the study of the mathematical relations of the forms of crystals, the measurement of crystals on the goniometer and their practical determination; also, the study of the optical characters of the different groups of crystals, the determination of the position of the axes of light-elasticity, measurement of indices of refraction, of the optic axial angles, etc. (3) Determinative Mineralogy and Blowpipe Analysis: the study of the use of the blowpipe and its application to the determination of a mineral species.

Microscopical Petrography: the methods of research and the use of the microscope, the practical study of rocks in thin sections and in hand specimens.

Professor EATON :—*Botany*. At present there are no facilities for the profounder study of Vegetable Physiology. Structural Botany is taught in a practical way to the extent of preparing and examining microscopic specimens of the various tissues and elements found in phænogams, and in cryptogams, exclusive of fungi, including the use of the ordinary solvents, dyes, reagents, and mounting media used in this study. For the study of the North American Flora generally,

and the higher orders of cryptogams, with regard to their identification and geographical distribution, the facilities are excellent, and, under proper restrictions, students may have the privilege of consulting the very extensive private collections of the professor in charge.

Professor VERRILL :—*Zoology*. The course includes laboratory practice, recitations, readings, and lectures. The laboratory work is varied according to circumstances, in order to accommodate, so far as possible, those students who may wish to pursue special branches. A large part of the time is usually devoted to Comparative Anatomy, Morphology, and Systematic Zoology. Ample collections in the Peabody Museum, representing all classes of animals, are available for instruction, while the proximity to the sea renders it easy to provide fresh or living examples of most classes of marine animals for study and dissection.

All students in this course should be familiar with the use of the microscope. A knowledge of drawing sufficient to enable the student to make sketches of the objects studied is very desirable.

Professor S. I. SMITH :—*Comparative Anatomy and Histology*; two to four half-days a week during the first term. Laboratory instruction will be given with special reference to preparation for medical studies, or as a preparation for further biological study and investigation. The instruction will be adapted as far as possible to the special wants of the individual student.

During the last part of the second term, graduate or special students who desire to do so may attend the short course of lectures on embryology, with special reference to human morphology given to undergraduates in the course in biology (see above, p. 83).

VII. APPLIED SCIENCE

Professor DuBois :—*Practical Astronomy*. Instruction, especially adapted to candidates for the degree of Civil Engineer, is given in practical Astronomy applied to Geodesy, using as guides the treatises of Loomis and Doolittle. The practical instruction embraces the use

(1) Of the Theodolite or Surveyor's Transit, for determining time, latitude, and azimuth;

(2) Of the Sextant and Reflecting Circle for time, latitude, and longitude;

(3) Of the combined Portable Transit instrument and Zenith Telescope for time, latitude by Talcott's and other methods, longitude by moon culminations, etc. The instrument used is of three-foot focus and 2.6 inches aperture, with fine alidade level and position filar micrometer.

(4) The Meridian Circle (with five-foot telescope) is also available for transit and other observations, as well as the Clark Equatorial of

nine inches aperture, and a five-foot portable telescope by Clark, for occultations and other work.

Special students in Practical Astronomy are permitted to take up such branches of the subject, with the use of any of the above-mentioned instruments, as may best suit their purposes.

The time devoted to the subject will vary with the taste and purpose of each student and the time at his disposal. But for the degree of Civil Engineer, a good familiarity with the instruments named in 1, 2, and 3, as well as with the corresponding computations and practical problems, is required.

Professor JOHNSON:—*Agricultural Chemistry*; two hours a week, through the year. This course includes the following topics: the Atmosphere, Water, and Soil, in their various relations to Vegetation; Tillage; Fertilizers; Rotation of Crops; Irrigation.

Professor C. B. RICHARDS:—*Mechanical Engineering*. This course, arranged for candidates for the degree of Mechanical (or Dynamical) Engineer, is also open to Special Graduate Students, who will be allowed in certain cases to take selected parts. The leading topics are:

(1) *Applied Mechanics*; including graphical methods in applied kinematics, and in the investigation of mechanisms working with friction; graphical determinations of the accelerations of the moving parts of machines; the strength of materials as affecting the proportions of machine elements; the applications of the principles of hydraulics to the construction and working of turbines and pumps.

(2) *Thermo-dynamics*; applications to the compound steam engine, air compressors and compressed air motors, engines worked by volatile vapors, refrigerating machines, the warming and ventilation of buildings.

(3) *Machine Design*; in this course the student is engaged in practical exercises under the guidance of the professor in charge, investigating machinery, and designing and making working drawings, specifications, and estimations for machines and manufacturing plant. In addition to the study of machines in general, either of the following subjects will at the option of the student receive particular attention; (a) Marine Engineering; (b) Railway machinery; (c) Pumping machinery and plant; (d) Machinery and plant for manufacturing. The student is required to make complete drawings, from new designs, of at least one important piece of machinery under one of these subjects. A compound marine engine and boilers, a locomotive, a turbine, driving centrifugal pumps, a blowing-engine for an iron furnace, are examples.

Candidates for the degree of Mechanical Engineer are required to take also a selected course in Mathematics, to sustain a final examina-

ation, and to present a satisfactory thesis on a subject approved by the professor in charge of the course.

A course in applied electricity, and, when the facilities in the physical laboratory permit, a course of laboratory work under the superintendence of the professor in charge; also, lectures on Industrial Legislation and Finance, and lectures on the higher Mathematics, are open to all students in this course.

Professor DuBois:—*Civil Engineering*. This course offers instruction for advanced graduate students, as well as for those students who may be regular candidates for the degree of Civil Engineer. It embraces the following topics:

(1) *Mechanics applied to Engineering*; including a course in Hydraulics, with reference to the various problems which arise in connection with water-supply, water-power, or irrigation; the efflux of water, flow through orifices and mouthpieces and over weirs, simple and submerged; questions of overflow and land damage; the effect of friction, contraction, enlargement, bends, valves, etc.; measurements of the discharge of pipes, rivers, and streams; the theory and design of water-motors; a course in Thermo-dynamics and its practical application to hot-air, gas and steam engines, and the heating and ventilation of buildings.

(2) *Surveys and Geodesy*; including methods of observation, base measurements, triangulation field work, theory of least squares, adjustment of observations, calculation of the triangulation, and computation of geodetic latitudes, longitudes, and azimuths.

(3) *Construction and Design*; including the strength and properties of materials, construction and design of bridges, roofs, foundations, retaining walls, dams and embankments, masonry, arches, sewerage and drainage, improvement of rivers and harbors, specifications and contracts, and the preparation of designs and working drawings.

Candidates for the degree of Civil Engineer are required to take, in addition, a selected course in Mathematics, Practical Astronomy, and when the facilities in the physical laboratory permit, a course of laboratory work, under the superintendence of the professors in charge. They are also required to sustain a final examination, and to present a satisfactory thesis accompanied by appropriate designs, upon a subject approved by the professor in charge of the course.

To special students, not candidates for the degree of Civil Engineer, a selection of special topics is allowed. The lectures of the Department upon Railroad Administration, Industrial Legislation and Finance, and upon the higher Mathematics, are open to all the students in this course.

VIII. FINE ARTS

For the instruction offered in the Fine Arts, see the next page.

SCHOOL OF THE FINE ARTS

COUNCIL

The Council of the School consists of the President of the University, the permanent officers of the School, and four members by election: Donald G. Mitchell, LL.D., Edward E. Salisbury, LL.D., J. Davenport Wheeler, Ph.B., and William W. Farnam, M.A.

FACULTY

Rev. TIMOTHY DWIGHT, D.D., LL.D., PRESIDENT

JOHN F. WEIR, N.A., M.A., *Director, and Professor of Painting*

Rev. JAMES M. HOPPIN, D.D., *Professor of the History of Art*

JOHN H. NIEMEYER, M.A., *Professor of Drawing*

FREDERIC R. HONEY, Ph.B., *Instructor in Perspective*

JOHN P. C. FOSTER, M.D., *Instructor in Anatomy*

_____, *Instructor in Architecture*

IRVING E. HURLBUT, *Librarian*

ORGANIZATION AND COURSE OF STUDY

The School aims to provide thorough technical instruction in the Arts of Design, viz.: Drawing, Painting, Sculpture, Architecture, and Copperplate Etching; and to afford a knowledge of such branches of learning as relate to the Philosophy, History, and Criticism of Art. As a professional School of Art it aims to furnish a thorough course of study in the practice of the studios; and as a department of the University it aims to provide instruction in Art as a constituent part of the scheme of general culture. These departments, of Practice and Criticism, may be regarded as distinct or correlative.

THE TECHNICAL COURSE

The technical instruction, for professional students, is based upon methods well adapted to discipline the aesthetic faculties and ground the pupil in the elements, or fundamental principles, which constitute the grammar of Art, as a foundation for all forms of special application. This instruction is arranged as follows :

IN DRAWING, the work is distributed over a three years' course. During the first year the practice of the studio is confined to drawing from the "Antique," from plaster casts; during the second year, to drawing from casts and the living model; and during the third year, to drawing from the living model, nude and draped. The classes under the supervision of the Instructor in this department are the antique portrait, nude-model, sketching, and composition classes; and until the Chairs of Sculpture and Copper-plate Etching are filled, these branches are included under the same supervision. Students showing the requisite proficiency in any class, will be advanced to the work of the second or third year according to individual ability. Instruction in this department precedes all special courses in the various branches of Art; no pupil is allowed to enter any of the advanced classes without this necessary qualification in that degree of proficiency which is deemed essential as a preliminary ground for such studies. Lectures on the principles of decoration, as applied in the various branches of Decorative Art, are included in this department; and a special course in "free-hand drawing" is arranged to meet the requirements of students in the Sheffield Scientific School, extending through the first term of the year.

IN ANATOMY, instruction is given in the form of lectures, and by drawings made from specimens and casts. The lectures are divided into two courses, for elementary and advanced classes. Each course consists of twenty lectures, one lecture a week to each class, continuing through the Winter and Spring Terms. The elementary course is devoted to the study of such portions of the human body as manifestly affect the external forms, the aim being to familiarize the pupil with the characteristics of those parts, independently of their combined action in modifying the external forms. Drawings of these parts are made by the pupils, in connection with the subjects discussed by the lecturer. The advanced course includes the whole structure of the human form in its plastic anatomy and mechanism. The skeleton and muscular system are viewed as a whole, and the modification of the external forms studied in action and repose. The subjects of proportion, equilibrium and motion, and expression, are studied, and original drawings

required in illustration, made from life, or from Greek sculptures, by reducing the same to their anatomical structure by the imagined removal of the integument.

IN PERSPECTIVE, the instruction is likewise given in the form of lectures, divided into two courses of twenty lectures each, for an elementary and an advanced class, illustrated by examples drawn on the black-board, illustrating the principles under discussion. The lectures are supplemented by practical exercises. The student is required to work out examples in the interim between the lectures. The elementary course includes the principles of plane geometry underlying perspective,—simple projections, or plan and elevation drawings. Objects are treated with reference to their true dimensions, as preliminary to their correct representation on a flat surface, as seen in perspective, at various distances, and from different points of view. The advanced course includes the study of shadows and reflections, and the application of the general principles of perspective to interior and exterior views. The pupil is required to work out problems in illustration of all the principles involved in linear perspective in its application to the various branches of art.

IN PAINTING, the work is divided into an elementary and an advanced course of study. The first studies are devoted to the acquisition of a knowledge of the elements of technical practice, by painting from still-life. When the pupil has acquired some knowledge of the means in representing objects in color, as to their value and relations, the remainder of the course is given to studies of the living model, in portrait, figure, and composition. This is continued while the pupil remains in the School. The course in painting implies, on the part of the pupil, a requisite knowledge of drawing, and drawing from the living model is continued throughout the course in connection with the work in color. The practice of the studio is supplemented by illustrated lectures on Color, Chiaroscuro, Composition, and such other special topics as relate to the principles and means of Art, or are comprehended in its theory and practice.

IN MODELING, a course is provided, including the anatomical lectures, and drawing. The work in this branch of instruction consists in first modeling in clay, from casts of Greek fragments, the head and other extremities of the human form, and then the whole figure. When the student has sufficient command of the method and means, the rest of the course is devoted to modeling from the living subject.

IN ARCHITECTURE, the course includes drawing, as provided in that special department in its elementary instruction, as well as the course in isometric projection and perspective. Under the instructor in Architecture, studies are made from notable examples of the various orders

and styles, in chronological order, with original projects in illustration to be worked out by the student. The means and methods of preparing plans, elevations, sectional and working drawings, and perspective views in India-ink and water-color, are comprehended in the elementary part of this course. Arrangements may be made with other departments of the University, by which students in Architecture can obtain the requisite instruction in mathematical subjects having a direct bearing on this art, including plane geometry, stone-cutting, the nature and strength of materials, and the principles of construction and engineering.

The course includes a general and comprehensive view of the historic development of the various architectures, with a comparative analysis of the same with respect to their principles of construction and decoration.

IN COPPER-PLATE ETCHING, a course is provided, and a room set apart for this special study, containing all the necessary appliances of this art, including a press. The instruction in this branch of art is, for the present, in charge of the Professor in Drawing.

COURSE IN THE HISTORY AND CRITICISM OF ART

The instruction in this department includes courses of lectures by the various Instructors of the School, arranged to include both professional students in regular course, and classes from other departments of the University where it is recognized as an "elective" study.

IN THE HISTORY OF ART, the course is as follows: 1. *The Origin and philosophy of the Art principle*—books chiefly referred to, Hegel, Lotze, Ruskin; 2. *Egyptian Art*—Perrot and Chipiez' "Histoire de l'Art de l'Antiquité," etc.; 3. *Oriental Art*, with special reference to its influence on Greek Art—Schnaase, Fergusson, Perrot and Chipiez, etc.; 4. *Greek Art*, Principles of Greek Art; Pelasgic construction, and the three orders of Greek Architecture; Greek Sculpture, including the Archaic, Phidian, and Naturalistic periods, and the Graeco-Roman, with recent researches at Olympia and other places; *Greek Painting*, Ceramic, Mosaic, and Mural—Winckelmann, Lessing, Ottfried Müller, J. Overbeck, Schnaase, Friedrichs, Charles Blanc, and Woltmann; 5. *Roman Art*, Fergusson, Dennis, Emil Braun, etc.; 6. *Beginnings of Christian Art*, classic sources and types; Religious Art; early Christian Painting and Iconography; early Christian Architecture—Lindsay, Fergusson, etc.; 7. *Byzantine Art*, Oriental, Christian, and Saracenic forms—Fergusson, Ruskin, etc.; 8. *Medieval Art*, Romanesque and Lombardic; Tuscan, Southern and Northern Gothic—Viollet-Le-Duc, Ruskin, Fergusson, etc.; 9. *The Renaissance*; rise of the Florentine

School, and the Schools of Sienna, Umbria, Lombardy, Rome, and Venice—Vasari, Lanzi, Kugler, Ruskin, Crowe and Cavalcaselle, Symonds, etc.; 10. *Modern Art*—Schools of Spain, Holland, Germany, France, and England; the Pre-Raphaelite, Romantic, and Impressionist movements; Art in America. The lectures are illustrated by means of the hydro-oxygen lantern.

IN THE PRINCIPLES AND MEANS OF ART, a course of twelve lectures is provided, fully illustrated, embracing the subjects of Line, Chiaroscuro, Color, Composition, and Expression,—following the path of the artist in his work. A course of twelve lectures discussing the technical methods of the Painter, the Sculptor, the Architect, and the Engraver, including an historic account of the technical development of these arts, is also provided.

The regular prescribed course of study, for professional students, covers a period of three years, but pupils are encouraged to remain in the School and pursue advanced studies after the expiration of the prescribed term. The fees are at the rate of twelve dollars per month, with an annual fee of five dollars. No pupil is received for a term of less than three months. The tuition fee for a fourth year's attendance is one-half the usual rate; pupils remaining for a longer period are classed as "honorary students" as such they are exempt from the payment of a tuition fee, but are charged an annual fee of ten dollars. The School is open to both sexes; no pupil is received under fifteen years of age. All applications for admission should be made through the Director. The School opens on the 1st of October, and the closing exercises are held on the 1st of June. At the end of the School-year an exhibition of the work of the various classes of pupils is held, continuing open through the summer months.

CERTIFICATES are awarded to pupils remaining in the School through the regular course of three years; and a DIPLOMA is awarded, on the ground of merit alone, to such students as fulfill all the requirements of a prescribed course of advanced studies in the several departments of instruction.

The "ETHEL CHILDE WALKER PRIZE," the income from a foundation of two hundred dollars, is awarded annually, under certain restrictions, to the most deserving pupil in the professional department.

THE ART LIBRARY, containing a collection of technical hand-books, current art-periodicals, and portfolios of engravings, is open, during specified hours, for the use of students. The pupils of the School are entitled to the use of the University Library, and to such other privileges, under the usual restrictions, as are granted to students in the other Departments.

Season-tickets, at fifty cents each, admitting the holder to the Galleries and Exhibitions throughout the year, are furnished to the undergraduates of all Departments of the University.

THE COLLECTIONS embrace the "Jarves Gallery of Italian Art," numbering one hundred and twenty-two paintings dating from the 11th to the 17th centuries; the "Ehrich Gallery of Dutch and Flemish Art," numbering one hundred and sixty-five paintings; the "Trumbull Gallery" of historical portraits and other works, numbering fifty-four pictures; a collection of contemporaneous art, numbering about fifty paintings; a collection of about one hundred and fifty casts and marbles, representative of the various periods of Greek and Renaissance Art; a valuable collection of Chinese porcelains and bronzes, loaned by Mr. Frederick Wells Williams; a series of very valuable Belgian wood-carvings of the 16th century, deposited in the School by Mrs. A. C. Alden; and a collection of Braun autotypes, and other reproductions, numbering about two hundred. The Collections are open daily for the use of students; and to the public, during the winter, from 1 to 5 P. M., and during the summer from 9 A. M. to 6 P. M.

The Art Building was erected in 1864, by Mr. Augustus R. Street (Yale College 1812), of New Haven, at a cost of about \$220,000. The School was partially endowed, to the extent of \$81,500, by Mrs. Street, who also made other gifts in aid of its objects.

DEPARTMENT OF THEOLOGY (YALE DIVINITY SCHOOL)

FACULTY

- REV. TIMOTHY DWIGHT, D.D., LL.D., PRESIDENT
REV. GEORGE E. DAY, D.D., *Professor of the Hebrew Language and Literature and Biblical Theology (Old Testament), and Dean*
REV. SAMUEL HARRIS, D.D., LL.D., *Professor of Systematic Theology*
REV. GEORGE P. FISHER, D.D., LL.D., *Professor of Ecclesiastical History*
REV. LEWIS O. BRASTOW, D.D., *Professor of Homiletics and the Pastoral Charge*
REV. GEORGE B. STEVENS, PH.D., D.D., *Professor of New Testament Criticism and Interpretation*
FRANK C. PORTER, B.D., PH.D., *Instructor in Biblical Theology (New Testament)*
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- MARK BAILEY, M.A., *Instructor in Elocution*
GOTTLIEB HENESS, M.A., *Instructor in German*
WILLIAM R. HARPER, PH.D., *University Professor of the Semitic Languages*
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SPECIAL LECTURERS

- REV. ADOLPHUS J. F. BEHREND, D.D., LYMAN BEECHER LECTURER
on Preaching
REV. JOHN HALL, D.D., LL.D., *on the Pulpit; how to use, how to abuse, and how to elevate it*
LEONARD J. SANFORD, M.D., *on the Preservation of Health*
HON. EDWARD J. PHELPS, LL.D., *on the Relation of Legal Principles to Christianity and the Ministerial Office*
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The annual term of study, commencing on Thursday, September 19th, 1889, will continue until the second Wednesday in May, 1890, when the Anniversary and the Annual Meeting of the Alumni will be held. The next term will begin on Thursday, September 18th, 1890. The School is open, on equal terms, to students of every Christian denomination. Blank forms of application may be obtained by addressing the Dean of the Faculty, Professor George E. Day, or any of the other Professors.

CONDITIONS OF ADMISSION

The conditions of admission are membership in some evangelical Church, or other satisfactory evidence of Christian character, and a liberal education at some College or University, or, in exceptional cases, an equivalent preparation for theological studies. Students of every Christian denomination, in case they are possessed of these qualifications, are admitted.

It is expected that every student will be promptly on the ground at the beginning of the session. Rooms are assigned in the order of application, but no room is reserved for any applicant who neglects to appear, beyond one week after the opening of the term.

COURSE OF STUDY

The regular Course of Instruction occupies three years, and is arranged in the following order:

JUNIOR YEAR:

Professor DAY will lecture once a week on the *Encyclopedia and Literature of Theology*, including a survey of the various branches of Biblical Literature, and an account, more or less extended, of the prominent writers and their works in the several departments of theological science.

Professor HARPER will give instruction in the grammatical principles of the Hebrew language in connection with the first eight chapters of Genesis; translation of these chapters from English into Hebrew and the acquisition of a vocabulary in the ground covered in his *Introductory Hebrew Method*, with a survey of the Pentateuchal criticism; rapid reading of Exodus i-xx, and Deuteronomy; translation at sight of the First Book of Samuel and a critical reading of Genesis xlix, Exodus xv, and Deuteronomy xxxii, xxxiii: Hebrew Syntax. Provision will also be made for the instruction of an advanced class in Hebrew.

Professor STEVENS will lecture four times a week on the Synoptic Gospels. The work will be conducted on the basis of Mark, but the parallel passages will also be read in the class and critically examined. It is designed to make this course a thorough study of the Life of Christ, with special reference to the successive stages of his teaching. Recitations will also be held in connection with the lectures, in which the members of the class will be examined upon the passages read. Dur-

ing a portion of the year lectures will be given on the General Introduction to the New Testament, including the principles of Textual Criticism, and on Special Introduction to the Synoptic Gospels, including the problems of their origin and relation. Essays on themes connected with critical New Testament study will be presented by the students and discussed in the presence of the class.

Professor HARRIS will lecture twice a week on the Philosophical Basis of Theism, and the Self-Revelation of God.

MIDDLE YEAR :

Professor HARRIS will lecture five times a week on Systematic Theology. This course will include a full and systematic investigation of the doctrines of Christianity, and of existing questions and controversies concerning them. The subjects will be treated in the following order: the Attributes of God; the Trinity; God the Creator, and his End in Creation; God's Providential Government; God's Moral Government; Sin; Redemption—the Atonement, Regeneration, Justification by Faith, the Spiritual Life; the Kingdom of Christ on Earth, its Progress and Triumph; Eschatology. Examinations on the topics discussed will be connected with the lectures, and entire freedom of question and discussion at every lecture is invited.

Professor DAY will give instruction in Old Testament Biblical Theology, as connected with the History and Religious Institutions of the people of Israel, Prophecy, and the Wisdom of the Hebrews. He will also give instruction in Biblical Aramaic to such members of the class as may desire it.

Professor HARPER will read with the class selections from the prophetic literature with particular reference to the principles of prophecy. The prophecies studied during the current year are those of Joel, Obadiah, and Hosea. Special attention is given to the subject of Hebrew Syntax.

Professor FISHER will give instruction three times a week on General Church History, embracing specially the branches of the subject which are not included under the History of Doctrine. They comprise the following topics: the Nature, Divisions, and Sources of Church History, with a Review of the Literature of the subject; the Old or Preparatory Dispensation in its relation to Christianity; the condition of the Graeco-Roman World at the Introduction of the Gospel; the Establishment of Christianity, and the Conflicts of the Apostolic Age; the spread of Christianity, including especially the Conversion of the Roman Empire and of the Teutonic Nations; the Changes in Ecclesiastical Polity in the Early Centuries; the Organization of Latin Christianity under the Papacy; the relations of the Papacy and the Church to Civil Society in the Middle Ages; the Protestant Reformation, with its Causes

and the Systems of Polity adopted by the different Protestant Churches; Christian Life, and its Characteristic Features in the Successive Eras (including the Rise and Subsequent History of Monasticism); the History of Christian Worship.

Professor STEVENS will lecture twice a week upon the Epistles to the Romans and Corinthians, with special reference to their doctrinal and practical contents.

Professor BRASTOW will give instruction, by lectures and critical exercises, in the principles of Rhetoric as applied to the work of Christian preaching, with special reference to the cultivation of an appropriate pulpit style.

SENIOR YEAR :

Professor BRASTOW will give instruction five times a week, by lectures and critical exercises, in different branches of Practical Theology, as follows : he will lecture once a week on Homiletics, and once a week will conduct a class exercise in the criticism of sermons and plans of sermons. It is proposed to make these practical exercises a prominent feature in the course. He will, also, give private instruction, at least twice during the year, to each member of the class in connection with the criticism of sermons, and will give personal aid in the study of Homiletical and General Literature. He will lecture twice a week upon Pastoral Theology, including the calling, training, and personal and official duties of the Christian ministry, with special reference to the leadership of the church in its various practical activities as connected with the interests of the Kingdom of God. He will also conduct class discussions of questions of practical interest relating to the work of the church.

Professor FISHER will lecture three times a week, through the year, on the History of Christian Doctrine and on Symbolical Theology. The course includes an explanation of the Origin of Theology as a Science, and a Discussion of True and False Theories of the Development of Doctrine ; a Survey of the Influence of Philosophy on Theology in the Successive Eras ; a Review of Authors in the field of Theological Literature ; a History of Theological Thought in the Church, in relation to the several Doctrines of the Christian system, down to the present time ; an account of the Comparative Tenets of the different religious bodies into which Christendom is divided.

Professor DAY will lecture once a week on portions of the prophetic books of the Old Testament, and will read with those who wish to prosecute the study of Syriac, the Peshito version of the New Testament.

Mr. PORTER will give instruction twice a week in the Biblical Theology of the New Testament. The aim and method of the science will be considered, and the various doctrines and types of teaching in the New

Testament will be studied in their historical character and relations. The order of topics in Weiss's Biblical Theology will be followed, and his views, with those of other important writers, will be critically examined. The topics will be treated in lectures and in discussions opened by members of the class.

President DWIGHT will lecture on special topics connected with the New Testament.

GRADUATE OR FOURTH YEAR CLASS

Into this class, which was established in 1879, only those who have completed a three years' course in this or some other Theological School can be admitted. It is designed to meet the wants of those who desire to pursue an advanced course of general theological study, or to apply themselves to special subjects of reading or investigation in any of the departments of theology, for one year or more, under the advice and direction of the Professors and with the help furnished by the Reference and University libraries.

For the year 1889-90 the following subjects are announced, selected after conference between them and the Professors, to which the whole class, or portions of it, attend. Individual members of the class pursue other branches of theological study by private arrangement with the Professors :

I. EX-PRESIDENT PORTER : Special Topics in Philosophy and Philosophical Theology.

II. PROFESSOR DAY : Examination and discussion of the more important Marginal Readings in the Revised Old Testament, as compared with the text now standing in the Revision.

III. PROFESSOR HARRIS : A Review of Systematic Theology in the reading and examination of Dr. Dörner's System of Christian Doctrine, with free colloquial discussion.

IV. PROFESSOR FISHER : Weiss's Life of Jesus. The method of study will embrace comments on the author, with conversational discussion and special investigations and essays by members of the class on questions of leading importance in connection with the Gospel narrative.

V. PROFESSOR BRASTOW : Schools of Preaching and the History of Preaching ; with critical exercises and discussions.

VI. PROFESSOR STEVENS: Weiss's Introduction to the New Testament. In addition to the discussion of the opinions of the author, the students will be directed in making investigations for themselves in other writings upon the same subjects and in the original sources.

VII. PROFESSOR GARMAN, of Amherst College, will give a special course of instruction on Philosophical Principles in their relation to Ethics and Civil Government.

VIII. MR. PORTER: Schürer's History of the Jewish People in the time of Christ; with special reference to the literature and thought of Judaism at this period, as bearing upon New Testament interpretation.

In addition to the above courses, Professor FISHER will meet, once a week, students of the Graduate Class who wish to read Pünjer's "History of the Christian Philosophy of Religion," and Pfeiderer's "Philosophy of Religion on the Basis of History." The meetings will be for the reading and discussion of essays by the students on special topics in these works.

For the year 1890-91, similar courses, or others which may be determined upon in consultation with the Professors and may be desired by the students, will be pursued. Students will also be aided in their private reading and investigations by the Professors.

Members of the Graduate Class are expected to express the purpose of continuing at the Seminary during the entire term. They will be furnished with rooms free of rent, and no charge will be made for instruction or the use of libraries.

The Hon. EDWARD J. PHELPS, LL.D., Kent Professor of Law in Yale College, and recently Minister of the United States to Great Britain, will deliver a course of lectures to the students of the Divinity School on the following subjects:

- I. *The Application of Legal Principles to the Evidences of Christianity.*
- II. *The Coincidence between the precepts of Christianity and the fundamental principles of the Common Law independently derived.*
- III. *The legal duties appertaining to the Ministerial Office.*

OPTIONAL STUDIES IN EITHER YEAR:

Professor HARPER will admit students who desire to pursue the study of Arabic or Assyrian into his graduate class, free of charge.

Professor DAY will read with those students who desire to become familiar with the theological literature of Germany and have made suffi-

cient progress in the language, some standard treatise in German on Christian doctrine, with critical remarks and references to the ablest works on special topics. The work selected for the present year is Dr. Julius Müller's *Christliche Lehre von der Sünde*.

Professor WHITNEY will give instruction to those who desire it, in Sanskrit.

Instruction in Vocal Music will be given during a portion of the year to students who desire it, by Dr. STOECKEL, the Instructor in Music in the University.

Professor LADD's University Course on Psychology, Metaphysics, the Theory of Cognition, and the Philosophy of Religion, is particularly intended to meet the wants of Theological Students. A select number of advanced pupils in Philosophy will also be admitted to the Course in Lotze's *Microcosmus*.

The members of the Divinity School, on conditions prescribed by the Faculty, are also allowed to attend, free of expense, any of the lectures in the COLLEGE, and also in the SHEFFIELD SCIENTIFIC SCHOOL, many of which are on subjects of special importance to pastors. These lectures are on the following subjects: *Moral Philosophy*, by Ex-President PORTER; *Intellectual Philosophy*, by Professor LADD; *History*, by Professor WHEELER; *Evolution and Cosmogony*, by Professor DANA; *Language*, by Professor WHITNEY; *Physical Geography*, by Professor BREWER; *Agricultural Chemistry*, by Professor JOHNSON; *Practical Agriculture*, by Professor BREWER; *Botany*, by Professor EATON; *Zoology and Entomology*, by Professor VERRILL.

Those who intend to become Foreign Missionaries have the further privilege of attending the lectures in the Medical School, on the payment of the matriculation fee of five dollars.

These opportunities for obtaining wider culture will be of special value to graduates of colleges and others who desire the means of pursuing studies to which they have not attended, or in which they seek further instruction.

ELOCUTION:

A thorough course of instruction in Elocution is given to the students, which is progressive in its character and extends through the three years of study for each class.

To the Junior Class a full course of lectures is given on the principles of logical and emotional analysis and expression, and on oratorical action and vocal culture. This is followed by individual practice in speaking and reading.

In the Middle year is added extended and frequent special practice in Scripture and hymn reading and in the reading and delivery of sermons.

To the Senior Class the instruction is given mainly in private lessons, and is designed to meet, so far as possible, the special needs of each individual in his preparation for the duties of the preacher's office.

EXERCISES IN PUBLIC SPEAKING :

There will be an exercise for all the classes in the MARQUAND CHAPEL, under the direction of Professor BRASTOW and in the presence of the Faculty, once in two weeks, in the delivery of sermons, or parts of sermons or addresses. Every alternate week there will be an exercise, designed to cultivate the power of the students in *extemporaneous speaking*, by the discussion of subjects of practical importance. Weekly debates are also held by the students in societies of their own.

LICENSE TO PREACH

The regular time for applying for license is at the close of the second year's study, before which time the members of the School are not allowed to preach.

PUBLIC WORSHIP

Prayers, with reading of the Scriptures and singing, are attended every morning in the MARQUAND Chapel. It is optional with each student whether to attend worship on the Lord's day in the College Chapel, or in one of the City Churches; but whatever may be his decision, it is hoped that he will engage, so far as may not be inconsistent with the prosecution of his studies, in some form of City Mission, Sabbath School, or other benevolent labor, for which constant opportunities are offered.

DEGREE

The Degree of Bachelor of Divinity is conferred on all members of the School who at the end of the Senior year pass the prescribed examination, and present an approved thesis on some topic of theology.

LIBRARIES

The *University Library*, containing about 145,000 volumes in the various departments of literature and science, is especially rich in its theological part, and stands in this

respect among the first libraries in the country. It is open seven hours on every secular day for consultation and for the drawing of books. The Divinity students in common with the other members of the University have access to it without charge. For a fuller notice of the advantages offered in this direction, the account of the Library on a later page of the Catalogue, may be consulted.

The *Reference Library* of the Divinity School, established by the late Henry Trowbridge, Esq., of New Haven, and now placed in the Bacon Memorial Hall, erected in 1882 by the late Frederick Marquand, Esq., as a memorial of the late Rev. Leonard Bacon, D.D., is open for consultation during several hours of the day. It contains nearly 3,000 carefully selected volumes, in every department of theological literature, and is designed to take the place, for each student, of a large and well selected private library. The latest books and periodicals are constantly added to it as they appear.

The valuable *Library of Church Music* belonging to the late Dr. Lowell Mason, was given to the Seminary by his family. This library, which is one of the largest of its kind in the country, is placed in one of the rooms in the West Divinity Hall.

The united Libraries of the College Literary Societies, containing 30,000 volumes in general literature, are accessible to theological students.

PHYSICAL EXERCISE

The College Gymnasium is open to the students of this Department at a small charge.

DIVINITY HALLS

The East Divinity Hall, which was erected in 1870, contains in addition to the Lecture Rooms for the three classes and rooms for the Professors, accommodations for about sixty students. The West Divinity Hall (parallel with the other building and adjacent to it) was erected in 1874, and

has, in addition to the room containing the Lowell Mason Library, accommodations for ninety students. The rooms in these buildings are warmed by steam, and lighted by gas, and are provided with all necessary furniture, except bed-clothes, which may be brought by the occupants, or will be furnished at a moderate charge by the Janitor. The assignment of rooms to new students is made in the order of their application. A number of the rooms are designed for two students, but, so far as practicable, single rooms will be assigned to applicants for admission who desire to room alone.

EXPENSES AND PECUNIARY AID

Students have only to make pecuniary provision for about eight months of study annually. In the four months of vacation, from May to September, they have the opportunity to engage in Home Missionary or other labor, with remuneration for their services.

The expenses for the annual session of 35 weeks are \$10 for each student for care of room and other incidental expenses; \$25 to \$30 for fuel and lights, or one-half of this sum in case two students occupy the same room. No charge is made for instruction or room rent, or for the use of Libraries.

The expense for board will be from \$3.50 to \$4 a week, at which prices most of the students have obtained good board during the past year.

Students in the Junior, Middle, and Senior Classes, whose circumstances require it, will receive \$100 a year from the income of Scholarships and other funds belonging to the School. Additional aid to the amount of \$75 annually is offered by the American College and Education Society to its beneficiaries. These means of assistance cover all the expenses mentioned above.

The Scholarships belonging to the Department bear respectively the names of James Hillhouse, William Leffingwell, George E. Dunham, Normand Smith, E. E. Salisbury, Thomas R. Trowbridge, Charles Atwater, Richard Borden,

Susan B. Dwight, Samuel Holmes, Charles Nichols, Noah Porter, John DeForest, James Dwight, J. B. Beadle, David Root, Rebecca Breed, Mary Goodman, Orin Fowler, Edward Bull, W. W. Seymour, William S. Eakin, Cassius Welles, and Robert McEwen.

After the close of the second year in May, students have opportunities to receive remuneration for preaching in the neighboring churches.

In general, it may be said that the aid which is provided for every young man, of any evangelical denomination, who gives promise of usefulness in the ministry, is sufficient, in connection with his own efforts, to enable him to complete a course of theological study.

GRADUATE FELLOWSHIPS

A Graduate Scholarship or Fellowship was established in this Department, in 1876, as a memorial of the late Mrs. Aurelia D. Hooker, of New Haven. It is assigned at graduation to that member of the class to which it is offered who, having been connected with the School through the entire course and being of approved Christian character, has, in the judgment of the Faculty, made such proficiency in theological studies as best to qualify him for the advantages offered by this foundation for the further prosecution of the same. The person to whom the scholarship is given receives the annual income (\$700) for two years after graduation, and is expected to pursue a course of theological study under the direction of the Faculty, either as a resident at the School, or, in case he may prefer to do so, in Europe or Palestine. The HOOKER FELLOWSHIP was offered to the class which entered the Divinity School in September, 1888, and is also offered to the class entering in September, 1890.

A SIMILAR GRADUATE SCHOLARSHIP yielding \$500, and affording to the student who shall receive it the same privileges for one year after graduation, was offered on the same conditions, to the class which entered the School in September, 1889.

DEPARTMENT OF MEDICINE (YALE MEDICAL SCHOOL)

FACULTY

REV. TIMOTHY DWIGHT, D.D., LL.D., PRESIDENT
MOSES C. WHITE, M.D., *Professor of Pathology*
CHARLES A. LINDSLEY, M.D., *Professor of Theory and Practice of Medicine*
WILLIAM H. CARMALT, M.D., *Professor of Surgery*
JAMES K. THACHER, M.D., *Professor of Physiology and Clinical Medicine*
FRANK E. BECKWITH, M.D., *Professor of Clinical Gynaecology*
JAMES CAMPBELL, M.D., *Professor of Obstetrics and Diseases of Women and Children*
THOMAS H. RUSSELL, M.D., *Professor of Materia Medica and Therapeutics*
SAMUEL W. WILLISTON, M.D., *Professor of Anatomy*
HERBERT E. SMITH, M.D., *Professor of Chemistry, and Dean*

OTHER INSTRUCTORS

WILLIAM H. BREWER, PH.D., *Lecturer on Sanitary Science and Public Health*
HENRY P. STEARNS, M.D., *Lecturer on Insanity*
SAMUEL B. ST. JOHN, M.D., *Lecturer on Ophthalmology*
HENRY FLEISCHNER, M.D., *Lecturer on Dermatology and Clinical Medicine*
FRANK H. WHEELER, M.D., *Assistant in Pathology*
CHARLES E. PARK, M.D., *Assistant in Surgical Clinic*
WILLIAM E. LOCKWOOD, M.D., *Demonstrator of Physiology*
HENRY L. SWAIN, M.D., *Lecturer on Diseases of Throat and Ear*
OLIVER T. OSBORNE, M.D., *Assistant in the Medical Clinic*
THOMAS G. LEE, M.D., *Lecturer on Histology and Bacteriology*

In the fall of 1810 a charter was granted to the President and Fellows of Yale College and the President and Fellows of the Connecticut Medical Society, authorizing them to unite according to the terms of certain "Articles of Union," before agreed upon, for the establishment of a medical sem-

inary, to be styled the Medical Institution of Yale College. Two years later the School was organized, and in the fall of 1813 instruction was begun. The Faculty consisted of four professors, appointed by the College Corporation from nominations by the Medical Society. Degrees were conferred by the College on the recommendation of the board of examiners, consisting of the members of the Faculty and an equal number appointed by the Medical Society. The instruction consisted of didactic and clinical lectures and dissections during the short winter course. Later, instruction was given during the spring months also, and from time to time the number of instructors was increased.

That this dual nature of the School and the method of instruction were wisely planned is shown by the position which the School took at once in the medical instruction of the time. But changes were gradually taking place in the relations between practitioners and students of medicine, and even greater changes in medicine itself, which seemed to demand a different kind of instruction. This School responded early to this demand, and in 1879 an entrance examination was imposed and a graded course extending over three full years and including considerable laboratory instruction was adopted. In 1884, by an agreement with the Medical Society, the College authorities assumed the entire control of the School.

In reorganizing the School as an integral part of the University, the inherent defects in the older and still common method of instructing chiefly by didactic lectures, were recognized, and the methods now employed are similar to those in vogue in the other Departments. Didactic lectures are still employed as best in some branches, but recitations from assigned readings, with explanatory lectures, laboratory work, and personal instruction in the clinics, constitute the main portion of the curriculum. The School has well equipped laboratories for the study of anatomy, histology, chemistry, physiology, and pathology, and the student spends much of his time in them during the first two years. In the second year he begins the practical branches of

medicine, to which he devotes the third year. While the attention of the student is particularly directed to those branches which can be studied to advantage only in a well equipped medical school, the value of clinical instruction is fully appreciated, and amply provided for. The details of the course of instruction are given below.

TERMS OF ADMISSION

Candidates for admission to the course leading to the degree of Doctor of Medicine, must be at least eighteen years old, and must present satisfactory testimonials of moral character from former instructors or physicians in good standing.

As evidence that he has had a sufficient preliminary education, each candidate must present proof that he has passed the matriculation examination of some scientific, literary, or professional college in good standing; or present testimonials from the proper officer that he has pursued the course at some high school, academy, or preparatory school, approved by the Faculty; or he must pass an examination in the following subjects:

1. ENGLISH: An essay of about two hundred and fifty words on some familiar subject to be announced at the time of the examination.
2. MATHEMATICS: The metric system of weights and measures. *Algebra*; to Quadratics. *Geometry*; Euclid, Books i and ii, or their equivalent.
3. PHYSICS: Balfour Stewart's Elementary Physics, or some equivalent work.

These examinations are conducted in writing, and are held at the Medical School at 9 A. M., on the Wednesday preceding the opening of the first term, and on the Thursday following Commencement.

Copies of the questions of previous examinations will be furnished on application to the Dean.

In conjunction with other Departments, matriculation examinations will be held also on the Thursday after Commencement, in Chicago, Cincinnati, and San Francisco. Particulars of the time and place will be announced in

the local papers. A fee of five dollars is charged for admission to examinations, held out of New Haven.

Students who have studied elsewhere in recognized medical schools, may present themselves for examination three weeks before Commencement and enter the examinations of the first year, or of the first and second years, according to their time of study. The results of these examinations will determine the class to which they belong.

Applicants for advanced standing who present themselves at other times of the year will be assigned to such classes as from their representations they seem to be fitted for, but at the next annual examination they will be examined in all of the studies previously passed by their class, as well as in those for the current year.

TERMS AND VACATIONS

The regular exercises of the School consist of three terms, covering thirty-four weeks, exclusive of a vacation of three weeks at Christmas and a recess in the spring, usually of one week.

The first term begins with the first Thursday of October, and continues eleven weeks. The second term begins three weeks after the close of the first, and continues twelve weeks. The third term is eleven weeks in length, ending with Commencement. (See Calendar, p. 6.)

COURSE OF INSTRUCTION

JUNIOR YEAR :

Chemistry : Illustrated Lectures and Recitations, 4 hours*, Professor Smith. Chemical Laboratory, 8 hours, Professor Smith and Mr. Baldwin.

Anatomy : Lectures and Recitations, 3 hours, Professor Williston. *Osteology and Syndesmology*, Laboratory work and Recitations, 2 hours. *Dissections* : four times a week, Professor Williston. *Autopsies*, Professor White.

Histology : Laboratory work, 3 hours, Lectures, and Recitations, 2 hours, Dr. Lee.

Physiology : Recitations and Demonstrations, 3 hours, Professor Thacher and Dr. Lockwood.

* In each week.

MIDDLE YEAR :

Anatomy : Lectures and Recitations, 3 hours, Professor Williston. Dissections, four times a week.

Materia Medica and Therapeutics : Lectures and Recitations, 3 hours, Professor Russell.

Physiology : Lectures and Recitations, 1 hour, Professor Thacher and Dr. Lockwood.

Pathology : Lectures and Recitations, 1 hour, Professor White. Laboratory work, 2 hours, Professor White and Dr. Wheeler. *Autopsies*, Professor White.

Medicine : Lectures and Recitations on General Medicine, 3 hours, Professor Lindsley.

Surgery : Lectures on General Surgery, 3 hours, Professor Carmalt.

Obstetrics and Diseases of Women and Children : Lectures and Recitations, 2 hours, Professor Campbell.

Dispensary Clinics, daily. Hospital Clinics. Operations at the Hospital.

SENIOR YEAR :

Pathology : Lectures and Recitations, 1 hour, Professor White. Laboratory work, 2 hours, Professor White and Dr. Wheeler. *Autopsies*, Professor White. *Bacteriology*, 1 hour, first term, Dr. Lee.

Medicine : Lectures on General Medicine, 3 hours, Professor Lindsley. Dispensary Clinic, 4 hours, Professor Thacher. Hospital Clinics, weekly throughout the academic year, Professor Thacher and Dr. Fleischner. *Insanity*, 1 hour, for nine weeks, Dr. Stearns. *Sanitary Science*, Professor Brewer, and *Toxicology*, Professor Smith, 1 hour, one term.

Surgery : Lectures on General Surgery, 3 hours, Professor Carmalt. Dispensary Clinic, 2 hours, Professor Carmalt. Hospital Clinic, once a week for five months, Professors Carmalt and Russell. Lectures on *Ophthalmology*, 1 hour, Dr. St. John. *Ear and Throat Clinic*, 1 hour, Dr. Swain.

Obstetrics and Diseases of Women and Children : Lectures and Recitations, 2 hours, Professor Campbell. Dispensary Clinic for Diseases of Women, 2 hours, Dr. Wheeler.

Dispensary Clinics, daily. Hospital Clinics. Operations at the Hospital.

CHEMISTRY—In the lectures and recitations on *General Chemistry* the students are as well grounded as is practicable on the fundamental principles of the science, on the formulation of reactions, and the solution of problems. The properties of the elements and their chief compounds are illustrated by experiments and the use of a large collection. Much attention is devoted to the study of organic compounds; the

properties and theories as to the constitution of these important bodies are illustrated by specimens and by the preparation of many of the typical compounds before the class.

Qualitative Analysis is taught so far as to require each student to be able to analyze a mixture of the salts of the common metals. Each student is furnished with a desk and all required apparatus and reagents. The course is systematic and is well adapted to cultivate habits of observation and the analytical method of thought. The elements of *Quantitative Analysis* are taught, a number of typical determinations being made by volumetric and gravimetric methods.

The course in *Physiological and Medical Chemistry* consists of recitations and a practical laboratory study of the composition and reactions of the various animal tissues and fluids, the processes of metabolism and digestion, and the action of ferments. Due attention is paid to the composition of foods, the physiological use of the digestive preparations, and other matters of medical interest, especially to the recent analytical methods employed in clinical work. The study of normal urine is supplemented by abundant practice in the chemical and microscopical examination of pathological specimens.

ANATOMY—As in the other fundamental branches of Medicine, the instruction in Anatomy is chiefly by means of recitations and laboratory work. The course extends through two years, with examinations at the end of each year. At the beginning of the course, each student is provided with a box containing all parts of the skeleton, for home study, and, during the first term, two weekly laboratory lectures are given, on osteology and syndesmology, alternating with recitations from the text-book. After a thorough knowledge of the bones, ligaments, and muscular attachments has been obtained, the student enters upon laboratory work of the soft parts, in which eight hours weekly are required until the dissection of all parts of the body has been made. Preparations of the different parts are made, showing muscles, arteries, and nerves, satisfactory demonstrations of which must be given before the Professor at their completion. Preliminary to the dissection of the human body, a brief laboratory course is pursued in the anatomy of the cat. All laboratory work is under the immediate instruction of the Professor. The written examination at the close of the year is upon osteology, syndesmology, and the trunk viscera.

The instruction the second year is by alternating lectures and recitations, and includes the remainder of systematic anatomy, with topographical and superficial anatomy, illustrated by preparations, models, and several hundred lantern slides.

NORMAL HISTOLOGY—This subject is treated from the embryological standpoint. By this method the student is enabled to gain not only a thorough understanding of the structure of the various tissues and

organs of the body, but also to trace their development and growth. The course of instruction consists of lectures, recitations, and laboratory work. The lectures are very fully illustrated by lantern transparencies made from photographs of typical sections and drawings. These are accompanied by recitations from a standard text-book. In the laboratory, each student is furnished with a microscope and an outfit of all reagents and apparatus required for thorough work. He receives carefully prepared sections and specimens of all the tissues and organs of the body, both in the adult and embryonic condition; these are mounted for permanent preservation and from them careful drawings are made. Practical instruction is given each student in the technology of the subject.

The laboratory cabinet contains an extensive reference collection of histological specimens and serial sections of embryos; this together with the most recent instruments and publications, and an abundant supply of material, affords good facilities for advanced work.

PHYSIOLOGY—The design of the regular course of instruction in this branch may be described as essentially the impression of modern physiology on the mind of the student, following the lines and methods and according to the measure of Dr. Foster's excellent presentation in his manual. To accomplish this purpose full experimental illustrations of the more important principles of physiological physics are given, accompanied by such demonstrations of the fundamental principles of physiology as will make a clear and lasting impression upon the mind of the student. During the first part of the year instruction is given in elementary physiology, for the especial benefit of those who have had no preliminary training in biology. This elementary instruction is accompanied by work in the laboratory, in order that students may become perfectly familiar with the principles of physiology and with the apparatus, before entering upon the more advanced study. In the laboratory the students have the opportunity to serve as assistants during the demonstrations, and thus are enabled to acquire both an intimate knowledge of the subject and a manual skill which will be of service to them in their professional work. Regular recitations are held with the three-fold design of enforcing the principles which have previously been demonstrated, of preparing students in advance for work in the laboratory, and of holding them individually to a systematic and thorough course of study.

Care is taken to call attention to the relations of physiological facts, as they present themselves, to practical medicine.

The physiological laboratory is well supplied with apparatus, comprising most of the instruments essential for physiological demonstration and research. Students desirous of investigating some particular subject in experimental physiology will be taken into the laboratory

without extra charge, furnished with the requisite apparatus, and directed in their work.

MATERIA MEDICA AND THERAPEUTICS—The instruction in this department is given by recitations chiefly. These are illustrated by the specimens from a large collection of the materia medica, though the botany, physical character, and chemical composition of drugs, receive much less attention than their physiological actions and therapeutical uses; the lectures are devoted more particularly to the elucidation of the latter subjects. A reasonable portion of time is devoted to exercises in prescription writing, in both the metric and English systems. The students are required to prescribe for a large variety of hypothetical cases, calling for the administration of most of the drugs of the materia medica.

PATHOLOGY—The instruction in pathology consists of lectures, recitations, and laboratory work in pathological histology. The laboratory is supplied with excellent microscopes which are furnished to each student, together with all necessary apparatus and reagents for the preparation, study, and preservation of microscopical specimens of morbid tissues.

Pathological anatomy is illustrated by a large collection of specimens and drawings, with which the museum is supplied, and supplemented by fresh pathological specimens. Students are also expected to attend all the autopsies made at the Morgue of the New Haven Hospital. This large and convenient morgue was constructed with special reference to rendering autopsies available for the instruction of students.

Medical Jurisprudence—Instruction in this subject is given by lectures and demonstrations.

Bacteriology—The School has a special laboratory for the study of Bacteriology, which contains a fine equipment of modern apparatus, for carrying on investigations in all lines of research regarding Bacteria. There is also maintained a cabinet of cultures, both saprophytic and pathogenic.

Instruction is given by means of lectures, and demonstrations of the various methods of isolating and identifying these organisms.

Graduates and those desiring to do special work will be afforded excellent opportunities for study.

MEDICINE—The method so long in vogue in medical schools of teaching this important branch solely by didactic lectures, has for a few years past been superseded by a method combining lectures and recitations in the same exercise. It is the experience of this School that the latter method has been attended with much more satisfactory results. By this mode of instruction the student is not only informed of the special subject of the day, but is required to prepare himself from a text-book.

During the recitations questions upon the subject are encouraged, and the Professor has thus the best opportunity to explain such obscure points as he may find are not fully appreciated. The intent and aim of the teaching is to give the instruction a practical direction, the teacher being constantly mindful of the real needs of the student.

Clinical Instruction is carried on at the New Haven Hospital, and at the New Haven Dispensary which is on the School grounds.

In the medical clinics at the Dispensary, the preliminary examination is made by a student, and this is reviewed and extended as far as necessary by the instructor; the latter explains the relations of the symptoms, makes the diagnosis, and gives the student in charge general directions for treatment; the student, subject to correction, gives the precise directions to the patient. All symptoms and physical signs are demonstrated to all the members of the class, and examinations of urine, sputum, gastric contents, and blood are made, when called for, by the student, under the supervision of the instructors.

It is the especial aim in these clinics to familiarize the student with all methods and instruments of diagnostic examination, and the instruction is made as personal as possible. Cases which need to be seen at home are put in charge of the senior students, and obstetrical cases are assigned to them. In such cases the Professor of Clinical Medicine or his assistants give counsel whenever called on.

At the Hospital one medical clinic is held each week during the entire academic year by Professor Thacher and Dr. Fleischner; these are general medical clinics, but particular attention is given to the demonstration of the various signs of importance in *Physical Diagnosis*. Opportunity is also here provided for the study of those severer cases which the Dispensary service does not furnish, and care is taken to have the students see the same patient in various stages of his disease, and, in fatal cases, to demonstrate the lesions.

Mental Diseases receive special consideration in a course of didactic lectures by Dr. Stearns, and by visits to hospitals for the insane.

Dermatology is taught in a course of clinical lectures by Dr. Fleischner.

Sanitary Science and the Public Health receive attention from Professor Brewer in a course of lectures, which includes the elements of these subjects, with a discussion of methods in practice, and of public sanitary administration.

Toxicology is taught in a course of experimental lectures by Professor Smith, and as treated includes a discussion of the general subject-matter of the science, the statistics of the use of the different poisons, and an exposition of the chemistry and the medico-legal bearings of the ptomaines.

SURGERY—Three didactic lectures to the Senior and Middle classes are given weekly, on the principles and practice of surgery, the course

running through two years. Illustrations of minor surgical practice are shown in the service of the New Haven Dispensary, by Professor Carmalt, who has charge of the surgical division. The wards of the New Haven Hospital afford opportunities for the observation and study of the more severe injuries and important surgical diseases. Professors Carmalt and Russell, who are of the visiting staff, hold weekly clinics during their terms of service, in which the advanced students are shown the cases during their whole stay in the Hospital, studying the causes which necessitate operations, where such are necessary, seeing the operations, among which are many of the most important in surgery, and observing the results of treatment.

Ophthalmology is taught in a special course of lectures by Dr. S. B. St. John, of Hartford, and illustrated by a large number of cases in the surgical clinic, particular attention being given to their elucidation.

Otology and Laryngology are taught by Dr. Swain in the Dispensary clinics. Each student is required to make examinations with instruments, and becomes familiar with their use and with the normal and principal pathological conditions of the throat and ear.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN—Instruction is given in obstetrics by lectures and recitations, with practical demonstrations of the operations of midwifery. Senior students are assigned obstetrical cases under the direction of the Professor in charge.

Gynaecology is taught by lectures, recitations, and clinics. The Senior class receive instruction from Professor Beckwith at the bed-side in the Hospital, and in the Dispensary from Dr. Wheeler.

Diseases of Children—This important branch of medicine is taught by didactic lectures and recitations, as well as by clinical instruction at the Dispensary and Hospital.

THE NEW HAVEN HOSPITAL is situated but a short distance from the School building, and being the only hospital in a large manufacturing city, which is also a considerable railroad center, its wards constantly afford ample material for the illustration of disease, and furnish frequent occasion for the performance of the various surgical operations.

The new *operating theatre* is now completed and is thoroughly equipped with every requisite and convenience for surgical work. The arrangements are planned with special reference to making the operations available for purposes of instruction to students.

Three Resident Physicians are appointed annually according to the results of an examination before the medical staff. Graduates of this School frequently obtain appointments also in the hospitals of neighboring cities.

THE NEW HAVEN DISPENSARY is located on the School grounds. Extensive changes have been made in the building during the past summer,

a substantial addition has been erected and the old building remodeled. It is now so arranged as to afford the greatest facilities for the examination and treatment of the many patients who seek aid at this charity, and to furnish the best opportunities to instruct the students, who daily participate in the work of the institution.

WRITTEN EXAMINATIONS are held at the close of each year on the studies of the year. The examinations at the end of the first year are upon General and Medical Chemistry, Histology, Anatomy, and Physiology.

Those at the end of the second year are upon Advanced Physiology, Advanced Anatomy, Materia Medica and Therapeutics.

Those at the end of the third year are upon Pathology, Surgery, Medicine, and Obstetrics, with a practical examination in Clinical Medicine.

REQUIREMENTS FOR A DEGREE

In order to be eligible for the degree of Doctor of Medicine, every candidate must fulfill the following conditions:

I. He must be at least twenty-one years of age, and must sustain a good reputation for moral character.

II. He must have spent three years as a student in this School, or if but one or two years in this School, he must have pursued such studies in some other recognized institution, as are considered by the Faculty to be the equivalent of the remainder of the full term of study. The last year must have been in this School.

III. He must have passed to the satisfaction of the Faculty, the prescribed examinations of the course. And he must have presented a satisfactory thesis on some subject relating to medicine. The thesis should be presented to the Dean on the third Wednesday before Commencement.

HONORS AND PRIZES

The degree of Doctor of Medicine *magna cum laude*, will be conferred on students whose examinations and school work show distinguished merit.

The degree of Doctor of Medicine *cum laude* will be conferred on students whose examinations and school work show unusual merit.

THE CAMPBELL GOLD MEDAL is awarded to that member of the graduating class who secures the highest rank in the examinations of the course.

THE KEESE PRIZE—The income of the fund for the Keese Prize, a memorial of Hobart Keese, M.D., of the class of 1855, which amounts to about \$150 annually, is awarded by the Faculty to that member of the graduating class who presents the best thesis.

THE CAMPBELL OBSTETRICAL PRIZE, consisting of a set of obstetrical instruments, is awarded to that member of the graduating class who passes the best examination in obstetrics.

Any of these prizes may be withheld at the option of the Faculty.

LIBRARY

The students of this Department can obtain from the Dean tickets admitting them to the free use of the University Library, which contains over 145,000 volumes, and includes the Medical Library.

GYMNASIUM

The privileges of the College Gymnasium can be had on payment of a small fee.

FEES AND EXPENSES

FIRST YEAR :

Matriculation (paid but once),	\$ 5.00
Tuition,	125.00
Practical Anatomy (including instruction and material),	10.00

SECOND YEAR :

Tuition,	125.00
Practical Anatomy (including instruction and material),	5.00

THIRD YEAR :

Tuition,	75.00
Graduation,	30.00

A deposit of \$5 is required in the chemical laboratory, and one of \$1 in the histological laboratory, to cover the cost of apparatus broken by the student ; at the end of the year the excess over the amount of breakage will be returned.

These fees give entrance to all the instruction of the School, including not only the lectures and quizzes, but the practical courses in analytical and physiological chemistry, urinary analysis, histology, pathology, osteology, syndesmology, and clinical medicine and surgery.

The tuition fee for the first and second years is due at the beginning of each of the three terms, in installments of \$45, \$45, and \$35, respectively ; for the third year the installments are \$27, \$27, and \$21.

Fees are paid to the Treasurer of the University, except the matriculation fee and the fee for graduation, which are paid to the Dean.

BOND—Students who do not pay in advance are required to give a bond to the Treasurer for three hundred dollars, executed by a satisfactory bondsman ; a blank for this bond will be furnished on application to the Treasurer. Those who deposit such bonds will receive term bills, with interest added, shortly before the end of each term, to be paid on or before the commencement of the next succeeding term, and students who deposit bonds must pay all arrearages before they can receive back their bonds from the Treasurer. No degree can be conferred, or certificates of attendance or examination furnished, until all bills due the School are paid.

Students will be assisted in finding board and lodging by the Janitor.* Prices range from four and a half dollars a week upwards.

INSTRUCTION TO GRADUATE AND SPECIAL STUDENTS NOT CANDIDATES FOR A DEGREE IN MEDICINE

The instruction here offered to graduates in medicine is intended to meet the requirements of two classes of stu-

* Mr. William Blackwood, 146 York St.

dents: first, those who wish to review or supplement their knowledge of the regular studies of the medical curriculum, as taught in this School; and second, those who wish to fit themselves in special lines of medical work, or for the duties of a medical examiner, or for medico-legal and sanitary examinations.

Courses in the following subjects are specially mentioned: Experimental Physiology; Physiological Chemistry; Chemical Analysis, including General Qualitative Analysis and the Quantitative Methods as applied in medicine; Experimental Toxicology and Medico-Legal Examinations; Sanitary Analysis, including the Chemical and Bacteriological Examinations of Food, Air, Water, etc.; Practical Anatomy; Normal and Pathological Histology; General Bacteriology.

But any of the regular studies may be taken, and special courses to meet the requirements of the student may be arranged at hours convenient to the instructors.

Special Students are not taken in the practical branches of medicine, but the studies mentioned above and the general studies of the course are open to such persons as may desire to pursue them, if by their previous studies they are prepared to profit by the instruction.

The charges for instruction will depend on the courses taken, and can be ascertained for any particular line of study by applying to the Dean.

For further information, address Professor HERBERT E. SMITH, Dean. Office hours, from 11:30 A. M. to 12:30 P. M. on Wednesdays, at the School, 150 York St.

DEPARTMENT OF LAW

(YALE LAW SCHOOL)

FACULTY

REV. TIMOTHY DWIGHT, D.D., LL.D., *PRESIDENT*
HON. FRANCIS WAYLAND, LL.D., *Dean*
HON. WILLIAM C. ROBINSON, LL.D., *Professor of Elementary and Criminal Law and the Law of Real Property*
SIMEON E. BALDWIN, M.A., *Professor of Constitutional and Mercantile Law, Corporations, and Wills*
JOHNSON T. PLATT, M.A., *Professor of General Jurisprudence and Torts*
WILLIAM K. TOWNSEND, D.C.L., *Edward J. Phelps Professor of Contracts and Admiralty Jurisprudence*
THEODORE S. WOOLSEY, LL.B., M.A., *Professor of International Law*

SPECIAL LECTURERS AND INSTRUCTORS

IN THE UNDERGRADUATE COURSE

HON. EDWARD J. PHELPS, LL.D., *Lecturer on Evidence and Equity*
HON. NATHANIEL SHIPMAN, LL.D., *Lecturer on Jurisdiction of and Procedure in U. S. Courts*
MARK BAILEY, M.A., *Instructor in Forensic Elocution*
HON. HENRY STODDARD, LL.B., M.A., *Instructor in Evidence and Practice*
HON. WILLIAM E. SIMONDS, LL.B., *Lecturer on Patent Law*
HON. MORRIS W. SEYMOUR, M.A., *Lecturer on Corporations*
M. DWIGHT COLLIER, M.A., *Lecturer on Attachments, Judgments, and Executions*
THOMAS THACHER, LL.B., M.A., *Lecturer on Corporate Trusts*
JAMES M. TOWNSEND, JR., LL.B., *Lecturer on Transfer of Monetary Securities*
GEORGE M. SHARP, LL.B., M.A., *Lecturer on Insurance*
ROGER FOSTER, LL.B., M.A., *Lecturer on Federal Jurisprudence*
———, *William L. Storrs Lecturer on Municipal Law*
GEORGE D. WATROUS, B.A., M.L., *Instructor in Contracts*

IN THE GRADUATE COURSE

ALBERT S. WHEELER, M.A., *Instructor in Roman Law*
ARTHUR M. WHEELER, M.A., *Instructor in English Constitutional History*
WILLIAM G. SUMNER, LL.D., *Instructor in Political and Social Science*
ARTHUR T. HADLEY, M.A., *Instructor in Railway Management and Economics of Transportation*
EDWARD V. RAYNOLDS, D.C.L., *Instructor in Comparative Jurisprudence*

JOHN A. ROBINSON, LL.B., M.D., *Librarian*
GEORGE E. BEERS, B.A., LL.B., *Assistant Librarian*

It is the aim of the School to give to all students in its regular undergraduate course a thorough acquaintance with the general principles and rules of American law, so as to fit them for the Bar of any State; to extend to those who do not propose to become practicing lawyers, but wish to pursue some particular branches of legal or political knowledge, such assistance as they may desire; and to offer to advanced students, who are able to devote to it the necessary time, instruction in all that belongs to law as a science in its widest sense. Such instruction is now given in an undergraduate course, a graduate course, and two special courses.

The undergraduate course is mainly devoted to the practical side of legal education, but also gives some introduction to the general ideas and sources of jurisprudence. In the graduate course, the studies are so arranged that those of the first year have no necessary connection with those of the next, and can therefore be profitably pursued by themselves when the student has no time to devote to a more extended education. The first year is mainly occupied with further instruction in practical topics begun in the undergraduate course, such as Corporations, Railroad Law, Patents, Code Pleading, and Practice in the United States Courts. The second year is mainly devoted to studies of a more scientific and philosophical character, such as General and Comparative Jurisprudence, Legislation and Government, Roman Law, the French Codes, and Private International Law. It is believed that the studies of the undergraduate course, and those of the first year of the graduate course, cover all the topics which it is desirable for the ordinary law student to examine before admission to the Bar; and the fourth year (in which the degree of Doctor of Civil Law is awarded) is recommended only to those who desire to fit themselves to be something more than practicing lawyers. For the special courses see page 156.

The School occupies an entire story of the Court House of New Haven County, facing the Green, on the oppo-

site side from the College buildings. It has, upon the same floor, two lecture-rooms, a large library hall, the office of the Dean of the Faculty, and other apartments furnishing every needed convenience for quiz-clubs and debating societies. A special feature of the School is the peculiar facility which it affords its students for observing actual practice in court. This is due to the fact that in the Court House two terms of the Supreme Court of Errors of Connecticut are held annually ; and the Superior Court and Court of Common Pleas (the principal Civil and Criminal Courts of the State) are also in session almost daily, during each of the School terms.

The students are allowed the freest access to the large library of the School, examining the books on the shelves for themselves, without the intervention of the librarian. The familiarity with the reports and authorities that is thus gained, the Faculty deem of great importance in accustoming the student to prepare his cases intelligently and thoroughly in his future practice. A debating society—the Kent Club—gives a good opportunity for practice in public speaking, and the formation of class quiz-clubs, to meet in the Law School apartments, is also encouraged. Those formed in the Junior year are under the special direction of the assistant librarian. The discussion of legal topics, unreservedly and familiarly by the students among themselves, is promoted, and the fact that they generally come from a wide range of States renders such comparisons of ideas of special interest and value to all. The share of the School in the general advantages of the University gives the students many opportunities of broadening their views and acquiring knowledge in regard to matters outside of their strictly professional work. They can, on application to the Dean, obtain permission to be present at one or more of the special courses of graduate instruction in the Department of Philosophy and the Arts, or the lectures on Medical Jurisprudence, Anatomy, Insanity, etc., in the Medical School, on payment of a moderate fee.

The College Gymnasium is open to members of the Law School on payment of moderate fees.

COURSES OF INSTRUCTION

The regular courses of instruction, including both required and elective studies, are as follows :

UNDERGRADUATE COURSE

JUNIOR YEAR :

Professor WAYLAND : Lectures—English Constitutional Law, International Law.

Professor ROBINSON : Recitations—Elementary Law, Pleading.

Professor BALDWIN : Recitations—Mercantile Law. Lectures—Nature and History of American Law, Wills or Roman Law.

Professor PLATT : Recitations—Torts. Lectures—Jurisprudence.

Professor TOWNSEND : Recitations—Contracts.

Judge STODDARD : Recitations—Evidence.

Mr. BAILEY : Lectures—Forensic Elocution.

SENIOR YEAR :

Professor ROBINSON : Recitations—Real Property, Domestic Relations. Lectures—Estates, Conveyancing, Forensic Oratory.

Professor BALDWIN : Recitations—Mercantile Law, Corporations. Lectures—American Constitutional Law, Public Corporations, Wills or Roman Law, Practice.

Professor PLATT : Recitations—Criminal Law. Lectures—Jurisprudence.

Professor TOWNSEND : Recitations—Contracts.

Professor WOOLSEY : Lectures—International Law.

Judge STODDARD : Lectures—Evidence and Practice.

Mr. SEYMOUR : Lectures—Private Corporations.

Mr. SIMONDS : Lectures—Patents.

Mr. COLLIER : Lectures—Attachments, Judgments, and Executions.

Mr. THACHER : Lectures—Corporate Trusts.

Mr. J. M. TOWNSEND : Lectures—Transfer of Monetary Securities.

Mr. FOSTER : Lectures—Federal Jurisprudence.

Mr. SHARP : Lectures—Insurance.

GRADUATE COURSE

FIRST YEAR :

Professor ROBINSON : Recitations—Patents.

Professor BALDWIN : Recitations—Railroad Law, Practice in U. S. Courts.

Professor PLATT : Recitations—Municipal Corporations, Statute Law.

Professor TOWNSEND : Recitations—Admiralty Law, Sales.

Professor WOOLSEY : Lectures—International Law.
Professor PHELPS : Recitations—Conflict of Laws.
Professor SUMNER : Lectures—Political History and Science.
Professor A. M. WHEELER : Lectures—English Constitutional History.
Professor HADLEY : Lectures—Railway management.
Dr. RAYNOLDS : Lectures—Roman Law, Comparative Constitutional Law.

SECOND YEAR :

Professor ROBINSON : Recitations—Early History of Real Property.
Lectures—Canon Law.
Professor BALDWIN : Recitations—Comparative Jurisprudence, Code Napoléon.
Professor PLATT : Recitations—General Jurisprudence, Charities and Trusts.
Professor WHEELER : Lectures—English Constitutional Law.
Professor SUMNER : Lectures—Political and Social Science.
Mr. A. S. WHEELER : Recitations—Roman Law.
Professor HADLEY : Lectures—Economics of Transportation.

The method of instruction, as will be seen by the foregoing schedule, is mainly that of recitations. It is the conviction of the Faculty of this Department, as well as the tradition of the University, that definite and permanent impressions concerning the principles and rules of any abstract science are best acquired by the study of standard text-books in private, followed by the examinations and explanations of the recitation room. Hence, although certain subjects are separately taught by lectures, either because the want of proper manuals, or the constant and rapid advance of learning, or economy of time, requires the adoption of that method, care is taken that the same topics shall be covered by recitation work in connection with the wider branches of the law to which they belong. The recitation hours, however, are not devoted entirely to the questioning of the student. While this is done with sufficient thoroughness to hold him up to his work of preparation, ample opportunity is afforded for a free colloquial discussion of the subject of the lesson and for the presentation and solution of the difficulties which he may have encountered in his private study. In this manner each student is brought into personal communication with the instructor in reference to his daily work, and, as far as practicable, receives the benefits which would be obtained if he were placed under the individual tutorship of his professor.

The several courses of study to which the attention of the student is directed in his undergraduate career are intended to familiarize him with all the branches of the law, which ordinarily become useful to the practitioner in the earlier years of his professional life. The course,

embracing Jurisprudence, American Law, English and American Constitutional Law, and Elementary Law, is pursued under the guidance of four different professors. In this course, the fundamental conceptions which underlie all systems of jurisprudence are brought to the notice of the student and fully defined and explained; the peculiar doctrines which characterize our American Law are pointed out; the principles of constitutional government, and the special features it exhibits both in this country and in England, are discussed; and the entire body of the common law in its four great divisions, is reduced to distinct propositions and illustrated by numerous collateral readings. This course alone covers the ground usually traversed by the student in an office prior to his admission to the bar.

The course in Real Property includes recitations in a standard work of a general character, and, subsequently, in text-books upon special subjects, such as the law of Mortgages, the law of Landlord and Tenant, etc. Collateral to this course are two others: one, a series of lectures on Estates, in which the law and practice in Guardianships of Infants and Incapables, and in the Administration of Decedents' Estates, are considered; the other, a course of practical instruction in Conveyancing, in which the students are exercised in drawing all the instruments commonly employed in the transaction of business concerning real property.

The course on Contracts is the most extended, as it is the most important, in the School. It occupies a greater part of the time of two of the professors. It continues during both the Junior and Senior years, and embraces, among other important topics, those of Agency, Bailments, Bankruptcy and Insolvency, Bills and Notes, Consideration and Assent, Contract Liabilities of Infants and Married Women, Liens, Marine, Fire, and Life Insurance, Partnership, Sales, Shipping Sureties, Trademarks, and Telegraphs. In addition to the text-books used in this course, the leading cases, decided since the text-book was written, are referred to, thus bringing the law on each point down to the date of instruction. Collateral to this course are five others: one on Wills, in which the law of testamentary dispositions and executorship is examined; another on Patents, in which the nature of patentable inventions, the mode of issuing letters patent, and the remedies for infringement are considered; a third on Corporations in general, treating the law governing the organization, privileges, duties, and liabilities of all incorporated bodies; the fourth and fifth on Private and Public Corporations respectively, in which the practical arrangement of each class is illustrated and explained.

The course on Torts consists of recitations on that subject, from recent and approved text-books, with a running commentary by the instructor, explaining and applying the principles contained in the lesson.

The course on Equity embraces the whole body of Equity Jurisprudence, and is taught by recitations from the text-book, with occasional

lectures on the obscurer topics. Collateral to this course is a series of lectures on Equity Pleading, discussing the principles and practice by which equitable remedies are governed and applied.

The course on Criminal Law extends through part of the Senior year, and embraces the topics of Procedure and Evidence as well as the substantive law of Crimes. Current cases of note, arising in any part of the country, are made subjects of discussion in connection with the rules of law by which they are to be decided.

The course on Pleading embraces the subjects of Common Law Pleading and Code Pleading, both taught by recitations and examples; while the details of the latter are enforced by requiring the students to draw complaints, answers, etc., in cases of their own selection, and to submit them to the instructors for criticism and correction.

The course on Evidence covers both its general rules, and those applicable to each form of action; recitations being supplemented by lectures amplifying and explaining, in the light of modern cases, the principles involved in the various topics. Collateral to this and the foregoing course are four others: one on Forensic Oratory, consisting of a series of lectures, in which the preparation and conduct of a suit, in all its different stages, are explained; the second, on Forensic Elocution, in which practical instruction is given in the art of public and forensic speaking; the third on Process, including the subjects of Attachments, Garnishment, and Execution; and the fourth on Practice, a series of familiar lectures on the methods of transacting general legal business, with an additional optional course upon the local rules and usages prevailing in Connecticut.

The course on International Law occupies portions of both undergraduate years. In the Junior year, the work consists of lectures covering the general field occupied by Woolsey and Pomeroy. In the Senior year, instruction is given by lectures on particular topics, especially on questions which are, for the time being, exciting public attention, and which demand the application of the principles examined in the previous year.

The course on Roman Law is intended as an introduction to the more advanced studies of the Graduate years, and, though necessarily brief, is sufficient to indicate the distinguishing features and doctrines of the civil law, and to refer to the original sources for more detailed information.

The studies of the first Graduate year have been selected with a view of preparing the intended practitioner for the higher walks of professional life. The subjects are of universal interest, the law which governs them is substantially the same in all parts of the country, they involve the most extensive financial enterprises of the age, and on these accounts form the most important practical topics at present embraced within our law. Particular attention to them has, therefore, been deemed

an essential requisite to a finished legal education, and the devotion to them of an additional year, on the part of students and instructors, has been thought a wise, if not a necessary measure. The various courses are critically taught both by text-book and by lecture, and each student receives all the assistance he may desire in his personal examination of cases and authorities. Special attention is paid to the methods of practice and pleading in the United States Courts, both in common law, equity, and admiralty cases, and instruction is therefore given on these subjects by three of the Faculty. The students are required to draft pleadings, and in matters of special difficulty, such as the conduct of proceedings *in rem* in admiralty, these pleadings are carried on through all the usual steps, and the issues made up are argued before the Professor. They are also made familiar with the leading cases on these points in the United States Supreme, Circuit, and District Courts. The value of this year of special work to the earnest and intelligent graduate cannot be overestimated.

The courses of instruction in the second Graduate year are designed to afford to the advanced student an opportunity to round out his legal acquirements with a knowledge of the more profound and philosophical principles of human law. The primary conceptions to which he was introduced at the commencement of his studies are again taken up and developed in a scientific method, and examined in the light of various systems of practical jurisprudence now or heretofore prevailing. In view of the limited time which can ordinarily be devoted by young men to these pursuits, the courses have been so arranged as to present these fundamental ideas as clearly and in as many applications as is possible, leaving it to future private study to enlarge the outline and complete the details of the work.

The course on General Jurisprudence consists of lectures and recitations from such works as Austin on Jurisprudence, Holmes on the Common Law, etc., and the students are required to write theses on the various topics. Charitable Trusts are examined with reference both to their creation and their proper administration. The course on Roman Law comprises the careful study of the Institutes of Justinian, in connection with institutional works of modern authors, and the perusal of selected titles from the Digest, accompanied by oral explanation. Particular attention is devoted to this course of study, and every effort is put forth to make the students familiar with the doctrines of the civil law, as well as with the technical language in which these have been expressed. The course on Comparative Jurisprudence includes among its chief branches a careful study of the French Codes, compared with other systems of jurisprudence, particularly the Roman, English, and American, and recitations upon private international and inter-state law, with the investigation of leading cases on these subjects, decided in the French and American courts. The course on Canon Law con-

sists of a series of lectures on the history, development, and fundamental theories of the Canon law, with select readings from the *Corpus Juris Canonici*, and from French and English treatises upon the subject. The course on Political and Social Science is one of the principal courses in the Philosophical Department of the University (see page 105), and is attended by the Graduate students of the Law School in common with the members of that Department. The course on the Economics of Transportation is a continuation of the series of Lectures on Railway Management given in the first graduate year, extending the view of the student from the single subject of railways to all the instrumentalities of commerce.

In addition to the regular course of instruction, two Special Courses are provided: one for those who desire some acquaintance with law as a preparation for business life; the other for persons not intending any active business or professional career, but desiring to acquire an enlarged acquaintance with our political and legal systems and the rules by which they are governed. The first of these special courses covers a single year; the second comprises two years. The studies of the first course may be arranged as follows, but this selection can be varied (if desired) on consultation with the Dean of the Faculty:

FIRST SPECIAL COURSE—ONE YEAR

Professor ROBINSON: Recitations—Elementary Law. Lectures—Estates.

Professor BALDWIN: Recitations—Agency, Partnership, Corporations, Bills and Notes, Bankruptcy and Insolvency. Lectures—American Law, American Constitutional Law.

Professor PLATT: Recitations—General Jurisprudence, Torts.

Professor TOWNSEND: Recitations—Marriage, and Husband and Wife, Sales, Shipping, Insurance, Sureties, Bailments, Telegraphs, Trade-marks, Liens.

Professor WAYLAND: Lectures—International Law.

Professor HADLEY: Lectures—Industrial Legislation.

Mr. BAILEY: Lectures—Elocution.

Mr. COLLIER: Lectures—Attachments, Judgments, and Executions.

Mr. THACHER: Lectures—Corporate Trusts.

Mr. J. M. TOWNSEND: Lectures—Transfer of Monetary Securities.

SECOND SPECIAL COURSE—TWO YEARS

FIRST YEAR

Professor ROBINSON: Recitations—Elementary Law. Lectures—Estates.

Professor BALDWIN: Recitations—Bankruptcy and Insolvency. Lectures—American Law, American Constitutional Law, Roman Law.

Professor PLATT: Recitations—General Jurisprudence.

Professor TOWNSEND: Recitations—Sales, Insurance.

Professor WAYLAND: Lectures—International Law.

Professor SUMNER: Lectures—Political and Social Science.

Professor FARNAM: Lectures—Public Finance.

Professor HADLEY: Lectures—Industrial Legislation.

Mr. BAILEY: Elocution.

Mr. SEYMOUR: Lectures—Private Corporations. •

Mr. WHITE: Lectures—Local Government in the United States.

Mr. SHARP: Lectures—Insurance.

SECOND YEAR

Professor PHELPS: Recitations—Private International Law.

Professor BALDWIN: Recitations—Private International Law.

Professor PLATT: Recitations—Municipal Corporations, General Jurisprudence.

Professor WOOLSEY: Lectures—International Law.

Professor SUMNER: Lectures—Political and Social Science.

Mr. WHEELER: Recitations—Roman Law.

Dr. RAYNOLDS: Lectures—Roman Law. •

Mr. THACHER: Lectures—Corporate Trusts.

Mr. J. M. TOWNSEND: Lectures—Transfer of Monetary Securities.

Mr. FOSTER: Lectures—Federal Jurisprudence.

In the latter course the students may, at their option, defer some of the studies of the first year until the second, and when desired, other branches taught in the Law School may be pursued, instead of certain of those here mentioned, at the discretion of the Faculty. Some or all of the studies of this course may be taken by those who, having received a bachelor's degree implying a course of undergraduate study equivalent to that pursued in the Academical Department, are completing their education with a view of applying for the degree of Doctor of Philosophy (see page 103). Those who take the full course may apply for the degree of Bachelor of Civil Law (B.C.L.).

Besides these various exercises, the undergraduate students are required, from time to time, to draft contracts,

wills, and other similar instruments; the work of each being reviewed and commented upon, either in public or in private, by the instructor. Public Moot Courts, besides those of the class quiz-clubs, are regularly held, at which one of the professors presides as judge; and the students acting as counsel, in the argument of cases, are required to draw the necessary pleadings, according to the common law or equity forms, as the case may be. Occasionally also, cases are tried by the students before a jury of their own number, in a court regularly organized, with a full complement of judicial, clerical, and executive officers, where the proceedings are conducted in the same manner as in ordinary courts of law.

TERMS AND VACATIONS

There are three terms in each year: the Fall Term, beginning thirteen weeks from the day after Commencement, and continuing to the Thursday before Christmas; the Winter Term, beginning in January, after a vacation of three weeks, and lasting eleven weeks; and the Spring Term, beginning after a vacation of two weeks, and continuing until Commencement.

REQUIREMENTS FOR ADMISSION

UNDERGRADUATE COURSE

Applicants for admission to the Junior Class must be at least eighteen years of age, and must produce certificates of good moral character. Students who have not received a liberal education at some collegiate institution will not be admitted as candidates for the degree of LL.B., until they have passed satisfactory examinations on the outlines of the History of England (Green's History of the English People is recommended) and of the United States, and on the text of the Constitution of the United States.. Those, however, will be excused from this examination who present a certificate that they have passed a "Regents' Exami-

nation for Law Students," conducted under the authority of the Board of Regents of the University of the State of New York.

To entitle a person to admission to advanced standing as a member of the Senior class, he must be at least nineteen years of age ; must, if a College graduate, have studied law under a competent instructor, or at the Law School of some College or University, for at least one year ; must, if not a College graduate, have studied law under a competent instructor for at least two years, or at a Law School for at least one year ; and must pass such examinations as are required for those entering the Senior Class in the regular course, at which it will be sufficient if he is prepared to be questioned on Parsons on Contracts (excepting only from vol. ii, pages 257 to 488, and from vol. iii, pages 350 to 423 and 525 to 557) ; Blackstone's Commentaries (except Book 4), Robinson's Elementary Law, Gould on Pleading, Townsend's Notes on Code Pleading, Greenleaf on Evidence, vol. i, Cooley on Torts, and the elementary principles of testamentary law, as given in such works as Hawkins on the Construction of Wills. Those not College graduates must also pass the preliminary English entrance examination, or produce a "Law Student's Certificate," from the Regents of the University of the State of New York. Attorneys at Law, however, of any State are entitled to admission to the Senior Class, without examination, on the exhibition of their certificates of admission to the bar ; and special students, not candidates for a degree, will be admitted to any of the exercises of the School without examination.

GRADUATE COURSE

The first year of the graduate course is open, without examination, to graduates from any Law School, having the degree of LL.B.

The last year is open only to those who have successfully completed the studies of the preceding year, and received the degree of Master of Law (M.L.). A preliminary ex-

amination upon the outlines of Roman Law and Roman History must also be passed, by all who have not taken their Bachelor's degree at some Law School where Roman Law is a prescribed study. The degree of Doctor of Civil Law (D.C.L.) may be applied for at the end of this year, by those who have been graduated at some collegiate institution as Bachelor of Arts, Philology, or Philosophy ; or who are graduates of this Law School, and have attained a prescribed standard of scholarship on their examinations for the degrees of LL.B. and of M.L. A good knowledge of either the French or German language, as well as of Latin, is also required. The Faculty will present no one for the degree of D.C.L., who has not attained a high standard of proficiency in the studies pursued.

EXAMINATIONS

There will be an examination of candidates for admission to the Junior Class immediately after the opening of the Fall Term. Candidates for admission to the Senior Class are examined at the end of the Spring Term, or beginning of the Fall Term. Seniors are examined for a degree, only at the close of the Spring Term. In the undergraduate course there are certain studies upon which all students are examined at the close of the year, and others upon which only those who desire, are examined. The award of "honors" is confined to those who pass both examinations. The Junior "pass" examination includes the studies of the year in Elementary Law, Contracts, Pleading, Evidence, Torts, and Wills. The Junior "honor" examination includes the studies of the year in Jurisprudence and International Law, and such other branches as the Faculty may from time to time prescribe. The Senior "pass" examination includes the studies of the year in Contracts, Real Property, Criminal Law, Equity, American Constitutional Law, Patents, Public and Private Corporations, and Estates. The Senior "honor" examination includes the studies of the year in International Law, Roman Law, and such other branches as the Faculty may from

time to time prescribe. Examinations for degrees in the graduate course are held at the close of the Spring Term. Every candidate for a degree, both in the undergraduate and graduate courses, must also submit a written thesis on a given legal topic, which must be approved by the Faculty.

LIBRARY, PRIZES, ETC.

The special Library of the Department, which has a permanent endowment for its support (the English Fund, established by the Hon. James E. English, M.A., in 1873), contains about nine thousand volumes, and is open daily during term time. It embraces all the reports of Great Britain and America, with an extensive collection of text-books and the leading legal periodicals. The students can also draw books from the general University libraries, containing 175,000 volumes.

The following prizes are open to competition:

The **TOWNSEND PRIZE** (established by the Hon. James M. Townsend, in 1874), of \$100, to that member of the Senior Class who shall write and pronounce the best oration or thesis at the public anniversary exercises on graduation.

The **JEWELL PRIZE** (established by the Hon. Marshall Jewell, M.A., in 1871), of \$50, to that member of the Senior Class who receives the highest marks at the final examination of his class, at their graduation.

The **BETTS PRIZE** (established by Frederic H. Betts, M.A., in 1875), of \$50, to that member of the Junior Class who receives the highest marks at his annual examination.

The **O. S. SEYMOUR PRIZE** (established by the family of the late Hon. Origen S. Seymour, LL.D., in 1885), of \$60, to that member of the graduating class who, in the opinion of the Faculty, has made the greatest improvement in scholarship during both years of his course.

DEGREES

In the undergraduate course the degree of Bachelor of Laws is conferred by the Corporation upon the recommendation of the Faculty of the Department, based on a satisfactory "pass" examination and the submission of a satisfactory thesis, on the following persons:

1st. Attorneys at Law, who have been members of the Department for one year after their admission to the Bar.

2d. Any students who have been members of the Department for not less than two years, and who passed satisfactorily the Junior "pass" examination at the end of their first year.

3d. Students who have been admitted to advanced standing as members of the Senior Class, and have remained in that Class for not less than one year.

The examination for the degree is mainly in writing, and is conducted under the supervision of an examining committee, appointed by the Superior Court, and the successful candidates, if twenty-one years of age, may be thereupon admitted to the Connecticut Bar. An oral examination is also had, upon one or two studies, before members of the Bar from different States, appointed for the purpose.

The degree of Bachelor of Civil Law (B.C.L.) will be conferred, after a satisfactory examination and submission of a satisfactory thesis, on those who complete the second special course of two years. In the graduate course the degrees of Master of Laws (M.L.) and Doctor of Civil Law (D.C.L.) are conferred under the conditions before specified.

Degrees are awarded, in cases of students of unusual merit, *cum laude*, *magna cum laude*, or *summa cum laude*.

EXPENSES

The fees for tuition and use of the library in the undergraduate and first special courses are \$45 for the Fall Term, \$35 for the Winter Term, and \$35 for the Spring Term, or

\$100 for the entire year ; and in the graduate and second special courses, for the first year, \$50 for the Fall Term, \$40 for the Winter Term, and \$40 for the Spring Term, or \$125 for the whole year ; and for the second year, \$80 for the Fall Term, \$70 for the Winter Term, and \$70 for the Spring Term, or \$200 for the whole year ; to be paid to the Treasurer of the University in advance, or secured by a bond with surety to his satisfaction. Where payment is not made in advance, interest will be added. The fee for graduation is \$5, and the Court fees for admission to the Bar are \$8. A further fee of \$5 is chargeable for admission to practice in the United States Courts for the District of Connecticut, if this is also desired. The tuition charges for other special students vary in proportion to the amount of instruction and supervision required. Board and lodgings can be obtained at prices ranging from \$5 a week upwards.

For further particulars, inquiries may be addressed to Professor Francis Wayland, Dean of the Faculty.

LIBRARIES

ADDISON VANNAME, M.A., *Librarian*

FRANKLIN B. DEXTER, M.A., *Assistant Librarian*

J. SUMNER SMITH, B.A., *Librarian of the Linonian and Brothers
Library*

HORACE KEPHART, M.A., *Assistant*

The Standing Committee in charge of the Library, appointed by the Corporation, consists of the following :— President DWIGHT, Ex-President PORTER, Professors SALISBURY, DAY, FISHER, NEWTON, and LOUNSBURY, and the Librarian.

The whole number of volumes in the several libraries of the University is over 200,000.

The UNIVERSITY LIBRARY contains about 145,000 volumes and many thousands of unbound pamphlets. For some years past the average annual increase has been 5,000 volumes. Of current periodical publications, including publications of learned societies, the Library receives an unusually large number, the foreign serials alone being not less than five hundred. While designed especially for the use of the officers, resident graduates, and students of the several Departments of the University, other persons may have the privilege of consulting and, by permission of the Library Committee, of drawing books. The Library is open daily, except Sundays, in term-time, from 9:30 A. M. to 5 P. M. (in Winter to 4:30 P. M.). In the Winter vacation it is open during the morning hours, and in the Summer vacation on Monday, Wednesday, and Saturday mornings.

The new library building, erected by the munificence of the late Hon. Simeon B. Chittenden, of Brooklyn, N. Y., which will furnish both admirable facilities for the use and abundant room for the growth of the library, will be completed during the present month (December), and occupied in January, 1890.

The LINONIAN AND BROTHERS LIBRARY, occupying one wing of the old Library building, contains 30,000 volumes, to which additions of not far from one thousand volumes, chiefly of the best current literature, are annually made. It is designed primarily for the use of the students, and is open in term-time, daily, except Sundays, from 9:30 to 11 A. M., and from 1:30 to 3 P. M. (on Saturdays to 4 P. M.). In vacation it is open on Wednesdays and Saturdays from 10 A. M. to 12 M.

In addition to the periodicals received at the University Library there will be found in the Reading Room (in the Cabinet building) forty-two daily newspapers, American and foreign, fifty weeklies, and over fifty periodicals. This is open daily in term-time from 9:30 A. M. to 8 P. M. (on Sundays from 1 to 8 P. M.).

In Dwight Hall, which is open daily from 7:45 A. M. to 9 P. M., will also be found forty-five newspapers and periodicals, mostly religious, and a library of nearly 1,000 volumes selected mainly with reference to the study of the Bible.

The LAW LIBRARY, containing about 9,000 volumes, among which are included complete sets of the English, American, Irish, and Canadian Reports, occupies rooms adjoining those of the Law School in the County Court House. It is open daily in term-time from 8:30 A. M. to 12:45 P. M., and from 2 to 5:30 P. M. (except Saturday afternoon); in vacation from 9 A. M.

The SHEFFIELD SCIENTIFIC SCHOOL LIBRARY, in Sheffield Hall, is a valuable collection of 6,000 volumes, chiefly mathematical.

The TROWBRIDGE REFERENCE LIBRARY of the Divinity School, in Bacon Memorial Hall, contains about 3,000 volumes of standard and recent theological literature. It is open in term-time throughout the afternoon.

The LOWELL MASON LIBRARY OF CHURCH MUSIC, in West Divinity Hall, is accessible to those interested in the study of this subject. It embraces about 8,000 titles in 4,000 volumes.

The Art School has a Library of about 500 volumes.

The Library of the Medical School is incorporated in the University Library.

The Library of the American Oriental Society, consisting of about four thousand books and manuscripts, is deposited in the University Library building.

PEABODY MUSEUM OF NATURAL HISTORY

TRUSTEES

PROFESSOR JAMES D. DANA, PH.D., LL.D., *Chairman*
GOVERNOR MORGAN E. BULKELEY, M.A., *ex-officio*
HON. ROBERT C. WINTHROP, LL.D.
PROFESSOR GEORGE J. BRUSH, LL.D., *Treasurer*
PROFESSOR OTHNIEL C. MARSH, PH.D., LL.D.
HON. GEORGE PEABODY WETMORE, M.A.
PROFESSOR EDWARD S. DANA, PH.D.

CURATORS

OTHNIEL C. MARSH, PH.D., LL.D., *Curator of the Geological Collection*
ADDISON E. VERRILL, M.A., *Curator of the Zoological Collection*
EDWARD S. DANA, PH.D., *Curator of the Mineralogical Collection*

In 1866, George Peabody, of London, but of Massachusetts birth, entrusted to a board of Trustees, selected by him, the sum of \$150,000, "to found and maintain a Museum of Natural History, especially in the departments of Zoology, Geology, and Mineralogy, in connection with Yale College." Of this sum \$100,000 was devoted by Mr. Peabody to the erection, "on land to be given for that purpose by the President and Fellows of Yale College, of a fire-proof building," "planned with special reference to its subsequent enlargement," to be, "when completed, the property of Yale College." Of the remainder of the gift, \$20,000 was set apart to "accumulate as a building fund," and \$30,000 to meet by its income from investment the expenses attending "the care of the museum, the increase of its collections, and the general interests of the departments of science before named."

Ten years later, in 1876, the first wing of the Museum—the part now standing—was completed and furnished with cases at a cost of \$175,000, the whole outlay being met by the accumulated building fund. The central part of the projected structure and the South wing—which will extend it to Library street—remain to be built whenever the means available for the purpose shall be adequate. The central part is much needed, as only a small part of the specimens secured can now be placed on exhibition in the first wing.

The first floor of the building is devoted to the department of Mineralogy and to the purposes of a large lecture room. The minerals occupy cases in the west room, the door of which fronts the entrance to the Museum. The minerals of the Gibbs collection, deposited by Col. George Gibbs with the College in 1809-10, and purchased in 1825 at a cost of \$20,000, and the extensive accumulations since made, are here preserved and for the most part on exhibition, making it one of the largest public collections in the country. The private cabinet of Professor Brush, arranged in drawers in his private room on the same story, although not open to general exhibition, adds greatly to the means of study and investigation in this department. Besides minerals, the exhibition room contains one of the largest collections of meteorites in the country; among the specimens, there are the famous mass of meteoric iron from Texas, weighing 1635 pounds; some hundreds of meteorites, large and small, all of which came from a single fall in Iowa, in May, 1879; the interesting Weston meteorite, which fell at Weston, Connecticut, in 1807, and was soon after described at length by Professors Silliman and Kingsley; besides many others of special interest. A case in the center of the room contains the large and beautiful collection of Chinese artistic work in stone, chiefly in jade and agate, with other like objects, bequeathed by Dr. S. Wells Williams, who was for forty-three years in China as Christian philanthropist, editor, author, and attaché to the American legation, and for some years before his decease was the Professor of Chinese in the University. The large

room on the same story adjoining the Mineral room, on the north side of the hall, is arranged for mineralogical and blowpipe instruction, with desks and a students' cabinet of minerals, and is under the charge of Professor Penfield.

The second floor is given up to Geology and Palæontology. The western exhibition room is occupied mainly by a collection of invertebrate fossils, arranged zoologically. The table cases contain a series illustrative of Dana's Manual of Geology. The collections of invertebrate fossils are especially in charge of Mr. C. E. Beecher.

The southern room contains vertebrate fossils. The latter are mostly collections made by Professor Marsh, the larger part from regions west of the Mississippi, in the various states and territories of the Rocky Mountain region, Oregon, etc. In this room, the horizontal case to the left of the entrance contains a large suite of specimens of remains of the *toothed* birds—the *Hesperornis* and *Ichthyornis*—discovered by Professor Marsh in the Cretaceous rocks of Kansas; and near by in the first vertical case against the wall are the bones of a large *Mastodon* from Southern New York. In the center of the room, there are a part of the bones of a gigantic *Dinosaur* from Wyoming, and, standing vertically, a large slab with the skeleton of a *Mosasaur* from Kansas. The horizontal case to the right of the entrance and the vertical case adjoining it against the west wall contain the remains of another *Dinosaur* about 30 feet long, which, as the specimens show, had ranges of very broad and thick plates, and one or two rows of immense spines, along the back. In the lower part of the next vertical case, lies a thigh-bone of an *Atlantosaurus* (the largest of *Dinosaurs*, and of land animals yet known), this bone having a length (when entire) of about seven feet. In a horizontal case on the south side of the same room there are, among the feet of various animals, the bones of the feet of three-toed and four-toed horses from the lower Tertiary of Wyoming. In two wall cases at the southeastern corner are the remains of the *Dinocerata*, huge mammals from the Eocene of Wyoming. In the

second wall case on the east are the bones of the Miocene Brontotheridae from Dakota and Nebraska.

Of the large collection of foot-prints belonging to the University, only a few fine slabs are on exhibition, part of them in each of the two exhibition rooms of the second story. One of the most interesting is a slab about twelve feet long covered throughout with raindrop impressions, and, besides these, two lines of foot-prints of biped reptiles, one line of them extending the whole length of the slab.

The third story is occupied with the zoological collections so far as there is room for their exhibition. The general zoological collection occupies the western room; and nearly the whole has been accumulated since Professor Verrill took charge of the department. The specimens are well arranged for exhibition and all labelled. Facing the south door stands a vertical case devoted to the Sponges, among which are many species of the siliceous or glass sponges (*Euplectella*, etc.). Beyond the sponges, twelve cases are filled with the collection of corals, which is one of the most extensive in the country. These are followed by the Echinoderms, etc. Several cases are devoted to a collection of the marine invertebrates of New England, which is nearly complete. Other cases contain special collections of the shells and corals of the Pacific Coast of America; of the corals of Bermuda; of the shells of Florida, etc. The collections are rich in species from the deep-sea dredgings in the Atlantic, but only a small part are on exhibition. Overhead are models, of natural size, of two of the huge Cephalopods of the world: one an Octopus from California, 28 feet in diameter (between the tips of opposite arms), and the other, nearer the door, a species of the Newfoundland seas, related to the Squids, having enormous eyes, and a length from the posterior extremity to the tip of the longer arms, of 42 feet. The models were made for the zoological department by Mr. J. H. Emerton.

The southern exhibition room of the zoological story contains a collection of skeletons in cases on its east and

south sides, commencing near the door. These are deposited by Professor Marsh. The skeletons of Mammals, beginning with man and the apes, occupy all the east side; and then come the birds, reptiles, and fishes. The rest of the cases are occupied with collections of Vertebrates, both mounted and alcoholic, and include a nearly complete series of the species inhabiting New England.

The second and third stories have also large laboratories and work rooms, devoted to the department represented in the exhibition rooms of the story. Those of the second or geological story are in charge of Professor Marsh; and those of the third or zoological story, besides serving for work rooms, are for the laboratory exercises and instruction of students in General Zoology under Professor Verrill. These rooms contain also large collections of specimens arranged in drawers and trays, which are open to special students in the department.

In the fourth story there is a large Archaeological collection. As the funds of the Museum are restricted to the departments of Mineralogy, Geology, and Zoology, the cases of the old Yale Museum were fitted up for this collection.

The basement is devoted to work rooms and store rooms, and contains a vast amount of specimens, in the departments especially of Palaeontology and Zoology. This part of the building is closed to visitors.

The exhibition rooms of the Museum are open between 9 A. M. and 6 P. M., except in the winter, when the hours are from 9 A. M. to 5 P. M. The janitor of the building is Mr. J. Rice, 92 High street.

THE OBSERVATORY

BOARD OF MANAGERS

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THE OBSERVATORY has been built from the avails of the gift of the late Hon. Oliver F. Winchester, of New Haven, on land given by the late Mrs. Cornelia L. Hillhouse and her daughters. The principal astronomical instruments now in use are a six-inch Heliometer constructed by Messrs. Repsold, of Hamburg, and an eight-inch Equatorial by Messrs. Grubb, of Dublin, given by Mr. Edward M. Reed, of New Haven.

Besides its ordinary astronomical work, the Observatory maintains two public services. Continuous time-signals are transmitted from the distributing clock at the Observatory to the railroads and other parties. The Observatory offers facilities also to persons interested in accurate Thermometry for the comparison of thermometers with standard instruments.

For the proper performance of these services the following equipment is in use :

1. Standard clocks, a transit instrument, chronographs, and the accessories for refined accuracy in the determination and transmission of time.

2. Apparatus for research and comparison in Thermometry, including a collection of the best thermometers obtainable of the foreign makers and observatories which devote special attention to thermometric standards.

Descriptive circulars of the Thermometric service may be obtained by addressing the Observatory.

By the will of Professor Elias Loomis, who died in August, 1889, the Observatory is to receive at once one third of the income, and will ultimately receive the entire income, of a fund established by him and called *the Loomis Fund*. The income received is to be applied to all, or one, or more, of the following objects only, namely, the payment of the salaries of observers whose time is exclusively devoted to the making of observations for the promotion of the science of Astronomy, or to the reduction of astronomical observations and their discussion in papers prepared for publication, or to defraying the expense of publishing these observations and of publishing investigations based upon astronomical observations. The principal of the Loomis Fund is about three hundred thousand dollars.

UNIVERSITY PRIZES

The JOHN A. PORTER PRIZE, of the value of two hundred and fifty dollars, established by the Kingsley Trust Association in 1872, is offered for the best English Essay on a prescribed subject. Competing essays must be handed in after the close of the Spring Recess, and the award will be announced on Commencement Day. Any person who has been pursuing a regular course for a degree in any Department during the whole of the current College year, may compete for this prize. If none of the competing essays is of sufficient merit, the prize will not be awarded.

The subjects for essays in 1890 are as follows:—

1. History of the Scotch branch of English Literature.
2. St. Simonism.
3. Relation of Spanish Literature to the Elizabethan Drama.
4. Historic consequences of the conversion of the Franks.
5. Baron Hirsch and the Jewish question.
6. Is the doctrine of Will (Schopenhauer) necessarily pessimistic?
7. Philo Judaeus and the Alexandrian philosophy.
8. Chief Justice Marshall and the Federal Constitution of the U. S.
9. Necessity for a uniform divorce law throughout the U. S.
10. Recent colonization movement in Germany.
11. History of Wages and Prices in the U. S. during the last thirty years.
12. Relations, past, present, and prospective, between the Dominion of Canada and the U. S.

The Essays will be due on May 1, 1890, at the office of the editor of the *New Englander*, No. 105 Grove street, New Haven.

The COBDEN CLUB SILVER MEDAL is awarded annually to that undergraduate of either the Academical or the Scientific Department who shows the greatest proficiency in the elements of Political Economy.

LISTS OF STUDENTS

DEPARTMENT OF PHILOSOPHY AND THE ARTS

COURSES OF GRADUATE INSTRUCTION

Herbert Austin Aikins, B.A. } University of Toronto, 1887 }	<i>Toronto, Canada</i>	74 Howe st.
Arthur Chambers Alexander, PH.B. } Yale University, 1889 }	<i>Honolulu, H. I.</i>	57 N. S. H.
William Lucius Armstrong, B.A. } Yale University, 1889 }	<i>Chicago, Ill.</i>	86 Wall st.
Lars Herman Beck, B.A. } Augustana College, 1885 }	<i>St. James, Minn.</i>	52 Court st.
John Vernon Bowersox, B.S. } Muskingum College, 1886 }	<i>Edgerton, O.</i>	71 Howe st.
Lester Bradner, Jr., B.A. } Yale University, 1889 }	<i>New Haven, Conn.</i>	16 York sq.
Philip Embury Browning, B.A. } Yale University, 1889 }	<i>Poughkeepsie, N. Y.</i>	106 Howe st.
Carleton Lewis Brownson, B.A. } Yale University, 1887 }	<i>New Haven, Conn.</i>	5 s.
Edward Capps, B.A. } Illinois College, 1887 }	<i>Jacksonville, Ill.</i>	103 Martin st.
Herbert DeWitt Carrington, PH.B. } Yale University, 1884 }	<i>New Haven, Conn.</i>	1169 Chapel st.
Frederick Lincoln Chase, B.A. } University of Colorado, 1886 }	<i>Boulder, Col.</i>	103 Martin st.
Clark Eugene Crandall, M.A. } Milton College, 1886 }	<i>New Haven, Conn.</i>	109 Elm st.
John Hubbard Curtis, B.A. } Yale University, 1887 }	<i>New Haven, Conn.</i>	364 Orange st.
Olaus Dahl, B.A. } Luther College, 1885, B.D. Yale University, 1889 }	<i>Lochiel, Wisc.</i>	1010 Chapel st.
John Havemeyer Daniels, B.A. } Yale University, 1889 }	<i>Jersey City, N. J.</i>	1 TR.
George William Davis, Owens Coll., Manchester, England, 1880 }	<i>Huron, N. Y.</i>	109 Elm st.

Edwin Kirke Dillingham, PH.B. } Yale University, 1889	<i>New Orleans, La.</i> 90 Wall st.
Frederick Wesley Ellis, B.A. } Yale University, 1889	<i>Ansonia, Conn.</i> 106 Howe st.
Carl J. Elofson, B.A. } Augustana College, 1888	<i>Valley Springs, S. Dak.</i> 56 Court st.
Harootune Enfiajian, PH.B. } Yale University, 1889	<i>Harpoot, Turkey</i> 20 Insurance B'ld'g.
Joseph Ralph Ensign, B.A. } Yale University, 1889	<i>Simsbury, Conn.</i> 18 Trumbull st.
James Washington Falls	<i>Allegheny City, Pa.</i> 154 Hallock av.
Oliver Cummings Farrington, M.S. } Maine State College, 1888	<i>Portland, Me.</i> 78 B.
Irving Fisher, B.A. } Yale University, 1888	<i>New Haven, Conn.</i> 119 Park st.
Ernest Leonard Fox, B.A. } Syracuse University, 1881	<i>Waterville, Conn.</i> 858 Chapel st.
George Stephen Goodspeed, B.A. } Brown University, 1880	<i>New Haven, Conn.</i> 383 George st.
William Griffiths, B.D. } Yale University, 1889	<i>Cwmlllynfell, South Wales</i> 17 E.
Matthew Griswold, Jr., PH.B. } Yale University, 1888	<i>Erie, Pa.</i> A.
John Augustus Hartwell, PH.B. } Yale University, 1889	<i>Unionville, N. Y.</i> 88 Wall st.
Charles Horswell, B.A. } Northwestern University, 1884	<i>Evanston, Ill.</i> 71 Howe st.
Edmund Otis Hovey, B.A. } Yale University, 1884, PH.D. Yale University, 1889	<i>Waterbury, Conn.</i> Waterbury
Washington Irving Hunt, B.A. } Yale University, 1886	<i>New Haven, Conn.</i> Athens, Greece
Morihiro Ichihara, } Kyoto Theol. Seminary, 1879	<i>Kyoto, Japan</i> 67 W.
Henning Jacobson	<i>Rockford, Ill.</i> 4 Mechanic st.
John Couzu Kebabian, B.A. } Yale University, 1888	<i>Rodoso, Turkey</i> 9 Library st.
Charles Foster Kent, B.A. } Yale University, 1889	<i>Palmyra, N. Y.</i> 107 York st.
Felix Kleeberg, PH.B. } Yale University, 1888	<i>New Haven, Conn.</i> 28 Home pl.
Thomas George Lee, M.D. } University of Pa., 1886	<i>New Haven, Conn.</i> 373 Crown st.
Clinton Lockhart, M.A. } Kentucky University, 1888	<i>Lexington, Ky.</i> 31½ Broadway
Edwin Hoyt Lockwood, PH.B. } Yale University, 1888	<i>New Canaan, Conn.</i> 57 N. S. H.

William Ellison Lockwood, PH.B. } Yale University 1883, M.D. Yale University, 1885	<i>New Haven, Conn.</i> 32 Pearl st.
Frank Ranney Luckey, B.S. } Cornell University 1882, B.D. Yale University, 1888	<i>New Haven, Conn.</i> 21 Eld st.
Boynton Wells McFarland, PH.B. } Yale University, 1889	<i>New Haven, Conn.</i> 306 Lawrence st.
William Adolphe McQuaid, B.A. } Yale University, 1889	<i>New Haven, Conn.</i> 181 Orchard st.
Frederic William Mar, B.A. } Yale University, 1888	<i>West Haven, Conn.</i> West Haven
George Wellington Miles, PH.B. } Yale University, 1889	<i>Milford, Conn.</i> Milford
Kumato Morita } Kyoto Theol. Seminary, 1879	<i>Kyoto, Japan</i> 439 George st.
Edwin Morrison, PH.B. } Yale University, 1888	<i>Cincinnati, O.</i> 1184 Chapel st.
William James Mutch, B.A. } University of Wisconsin 1882, B.D. Yale University, 1885	<i>New Haven, Conn.</i> 194 Cedar st.
Hanns Oertel, M.A. } Yale University, 1888	<i>Meissen, Germany</i> 31 York sq.
Gaylor Hawkins Patterson, B.A. } Ohio Wesleyan University, 1888	<i>Slippery Rock, Pa.</i> 439 George st.
William Lyon Phelps, B.A. } Yale University, 1887	<i>New Haven, Conn.</i> 44 High st.
Peter Rosenholm, } Betel Seminariat, Stockholm, 1886	<i>Delsbo, Sweden</i> 444 Howard av.
Eben Charles Sage, M.A. } Shurtleff College, 1881, B.D. Chicago Baptist Theol. Sem., 1882	<i>New Haven, Conn.</i> 46 Wolcott st.
Frank Knight Sanders, M.A. } Ripon College 1888, PH.D. Yale University, 1889	<i>New Haven, Conn.</i> 29 Beers st.
Thomas Frederic Sanford, B.A. } Yale University, 1888	<i>Redding, Conn.</i> 187 c.
Amos L. Schaeffer, B.A. } Franklin & Marshall College, 1889	<i>Fleetwood, Pa.</i> 419 Temple st.
Edmund Daniel Scott, B.A. } Yale University, 1889	<i>New Haven, Conn.</i> 44 Vernon st.
George Scott, M.A. } Alfred University, 1880	<i>Westerville, O.</i> 109 Elm st.
Charles Otis Scoville, B.A. } Yale University, 1887	<i>Westville, Conn.</i> Westville
James Alward Seymour, PH.B. } Yale University, 1885	<i>Auburn, N. Y.</i> A.
Paul Sheaffer, PH.B. } Yale University, 1889	<i>Pottsville, Pa.</i> 36 Elm st.

Daniel Shepardson, B.A. }	<i>Granville, O.</i>	439 George st.
Denison University, 1888 }		
Ernest Ellsworth Smith, PH.B. }	<i>New Haven, Conn.</i>	
Yale University, 1888 }		1018 Chapel st.
Herbert Augustine Smith, B.A. }	<i>Worcester, Mass.</i>	77 W.
Yale University, 1889 }		
Percy Franklin Smith, PH.B. }	<i>New Haven, Conn.</i>	13 Home pl.
Yale University, 1888 }		
Elias Hershey Sneath, M.A. }	<i>Farmington, Conn.</i>	Farmington
Lebanon Valley College, 1884, }		
B.D. Yale University, 1884 }		
Erwin Starr Sperry, PH.B. }	<i>Ansonia, Conn.</i>	Ansonia
Yale University, 1887 }		
Frederick Starr, B.A. }	<i>Hanover, Mass.</i>	109 Elm st.
Lafayette College, 1882 }		
Charles Emerson Stone, PH.B. }	<i>Spencer, Mass.</i>	16 S. H.
Yale University, 1889 }		
George Lincoln Teller, B.S. }	<i>Colon, Mich.</i>	379 Crown st.
Michigan Agricultural College }		
James Ten Broeke, B.A. }	<i>Panton, Vt.</i>	383 George st.
Middlebury College, 1884 }		
Herbert Cushing Tolman, B.A. }	<i>Hanover, Mass.</i>	1010 Chapel st.
Yale University, 1888 }		
William Conquest Tucker, PH.B. }	<i>New York City</i>	A.
Yale University, 1888 }		
Morgan Walcott, PH.B. }	<i>New York City</i>	1161 Chapel st.
Yale University, 1888 }		
Lewis Sheldon Welch, B.A. }	<i>Hartford, Conn.</i>	104 Wall st.
Yale University, 1889 }		
Philip Patterson Wells, B.A. }	<i>Louisville, Ky.</i>	107 York st.
Yale University, 1889 }		
John Whitmore, B.A. }	<i>New Haven, Conn.</i>	147 Bradley st.
Yale University, 1886 }		
Alfred Mundy Wilson, B.A. }	<i>New Haven, Conn.</i>	733 Elm st.
Denison University 1881, }		
Yale University, 1889 }		
Tetsutaro Yoshida	<i>Saitama, Japan</i>	27 Lynwood st.
Kichiro Yuasa, B.D. }	<i>Gunma, Japan</i>	439 George st.
Oberlin College, 1888 }		

ACADEMICAL DEPARTMENT

(YALE COLLEGE)

SENIOR CLASS

Jacob Jay Abt	<i>Chicago, Ill.</i>	137 F.
George L. Amerman	<i>New Haven, Conn.</i>	268 L.
Edgar Ames	<i>St. Louis, Mo.</i>	205 D.
Maximilian Baird	<i>Chicago, Ill.</i>	11 S.
Roger Sherman Baldwin	<i>New Haven, Conn.</i>	204 D.
James Robertson Barbour	<i>Montreal, Canada</i>	105 N.
Harry Jenkins Bardwell	<i>Tunkhannock, Pa.</i>	8 S.
Thomas Francis Bayard, Jr.	<i>Wilmington, Del.</i>	222 D.
William Hale Beckford	<i>Beverly, Mass.</i>	192 C.
Frederick Bedell	<i>Montclair, N. J.</i>	151 F.
Albert Bingley Bennett	<i>Williamson, N. Y.</i>	191 C.
Frank Stymets Bishop	<i>New Haven, Conn.</i>	61 Lyon st.
Herbert Morton Bishop	<i>New Haven, Conn.</i>	120 N.
Charles Bemis Bliss	<i>Abington, Conn.</i>	97 N.
Charles Wright Boltwood	<i>New Haven, Conn.</i>	77 Wall st.
Charles Cranston Bovey	<i>Minneapolis, Minn.</i>	218 D.
Frank Eli Bradley	<i>Quincy, Ill.</i>	7 S.
John Williams Brady	<i>Warsaw, N. Y.</i>	28 S.
Edward Brooks, Jr.	<i>Philadelphia, Pa.</i>	248 L.
Frank Terry Brooks	<i>New Haven, Conn.</i>	141 Edwards st.
George Henry Capen	<i>St. Louis, Mo.</i>	203 D.
Bert Francis Case	<i>Granby, Conn.</i>	72 N. M.
Amasa Day Chaffee	<i>Moodus, Conn.</i>	18 S.
Howard Dennis Collins	<i>Newport, R. I.</i>	247 L.
Arthur Willis Colton	<i>Wayne, Mich.</i>	7 S.
Walter Joseph Connor	<i>New Haven, Conn.</i>	37 S. M.
John White Corwith	<i>Chicago, Ill.</i>	12 S.
Howard Elmer Crall	<i>New York City</i>	263 L.
Robert Dillon Crane	<i>New York City</i>	209 D.
Albert Cushing Crehore	<i>Cleveland, O.</i>	13 S.
John Crosby	<i>Minneapolis, Minn.</i>	218 D.
George Henry Danforth	<i>Madison, N. J.</i>	24 S.
Arthur Pomeroy Day	<i>Hartford, Conn.</i>	220 D.
Walter Alden DeCamp	<i>Cincinnati, O.</i>	133 F.
Andrew Glassell Dickinson, Jr.	<i>New York City</i>	167 F.
Clayton Chauncey Dorsey	<i>Chico Springs, N. M.</i>	41 S. M.

George Wells Dupee	<i>Chicago, Ill.</i>	206 D.
Hamilton Hill Durand	<i>New York City</i>	124 N.
Clark Terry Durant	<i>Albany, N. Y.</i>	30 S.
Charles Dussler	<i>Clyde, N. Y.</i>	28 S.
Charles Albert Ebersole	<i>Cincinnati, O.</i>	179 LVC.
Wolcott Webster Ellsworth	<i>Hartford, Conn.</i>	101 N.
Arthur Espy	<i>Cincinnati, O.</i>	228 D.
John Dorrance Farnham	<i>Wilkes-Barre, Pa.</i>	221 D.
Horace Cheney Foote	<i>New York City</i>	105 N.
Henry Thatcher Fowler	<i>Poughkeepsie, N. Y.</i>	147 F.
George William Gedney	<i>Newburgh, N. Y.</i>	17 Wooster pl.
George Hills Gilman	<i>Hartford, Conn.</i>	256 L.
Rodney Lawrence Glisan	<i>Portland, Oregon</i>	172 F.
William Sherman Greene	<i>Brooklyn, N. Y.</i>	175 F.
Ellihu Marvin Griswold	<i>Erie, Pa.</i>	204 D.
Charles Humphrey Hamill	<i>Chicago, Ill.</i>	12 S.
Bert Hanson	<i>Great Falls, N. H.</i>	8 S.
Reginald Fairfax Harrison	<i>New York City</i>	258 L.
Robert Hartshorne	<i>Highlands, N. Y.</i>	221 D.
Charles Houston Haskell	<i>Norwich, Conn.</i>	263 L.
Lewis Scofield Haslam	<i>Stamford, Conn.</i>	237 D.
George Collier Hitchcock	<i>St. Louis, Mo.</i>	222 D.
George Day Holmes	<i>Montclair, N. Y.</i>	151 F.
Roland Holt	<i>New York City</i>	123 N.
Addison Hills Hough	<i>Cleveland, O.</i>	247 L.
May Humphreys	<i>New York City</i>	220 D.
George Arthur Hurd	<i>New York City</i>	258 L.
Otis King Hutchinson	<i>Chicago, Ill.</i>	206 D.
John DeCourcy Ireland	<i>New York City</i>	245 L.
Robert Livingston Ireland	<i>New York City</i>	245 L.
James Monfort Irvin	<i>Dayton, O.</i>	62 S. M.
John Day Jackson	<i>New York City</i>	160 F.
Norman James	<i>Baltimore, Md.</i>	259 L.
Elliott Proctor Joslin	<i>Oxford, Mass.</i>	147 F.
Charles Poole Kellogg	<i>Waterbury, Conn.</i>	259 L.
Ryland Morris Kendrick, B.A. University of Rochester, 1889	<i>Rochester, N. Y.</i>	216 D.
Chester Henry Keogh	<i>Chicago, Ill.</i>	41 S. M.
Yale Kneeland	<i>Brooklyn, N. Y.</i>	237 D.
Stephen Hurlburt Kohler	<i>Akron, O.</i>	257 L.
William Alfred Korn	<i>Norwich, Conn.</i>	59 S. M.
George Newton Lawson	<i>Union, Conn.</i>	2 S.
Harriman Willis Lee	<i>Buffalo, N. Y.</i>	255 L.
Charles Fitch Lester	<i>Norwich, Conn.</i>	97 N.
Thomas Jay Lloyd	<i>East Orange, N. Y.</i>	192 C.

James Locke	<i>Buffalo, N. Y.</i>	139 Elm st.
Walter Irenæus Lowe	<i>Whitinsville, Mass.</i>	72 N. M.
William Chittenden Lusk	<i>New York City</i>	42 S. M.
Abram Garrison McClintock	<i>Allegheny, Pa.</i>	246 L.
William Appleton McConnel	<i>Beaver, Pa.</i>	73 N. M.
Donald McCormick	<i>Harrisburg, Pa.</i>	120 N.
Ralph Augustine McDonnell	<i>New Haven, Conn.</i>	266 Portsea st.
Thomas Edward McEvoy	<i>Hopkinton, Mass.</i>	71 N. M.
John Francis McGuire	<i>Hopkinton, Mass.</i>	106 N.
Henry Smith Mathewson	<i>Pomfret, Conn.</i>	104 N.
Solomon Cristy Mead	<i>Greenwich, Conn.</i>	182 LYC.
Frank Sherman Meara	<i>Cottage City, Mass.</i>	73 N. M.
Robert Hale Merriam	<i>St. Paul, Minn.</i>	243 L.
Knowlton Mixer	<i>Buffalo, N. Y.</i>	179 LYC.
William Greenwood Morris	<i>New Haven, Conn.</i>	408 Crown st.
Sidney Nelson Morse	<i>North Woodstock, Conn.</i>	107 N.
Harry Loomis Munger	<i>Dayton, O.</i>	214 D.
Edward Lyman Munson	<i>New Haven, Conn.</i>	172 F.
Ashbel Barney Newell	<i>Chicago, Ill.</i>	246 L.
George Nathan Newman	<i>Buffalo, N. Y.</i>	133 Dwight st.
Henry Opdyke	<i>Plainfield, N. J.</i>	24 S.
Willard Parker, Jr.	<i>New York City</i>	235 D.
Herbert Parsons	<i>New York City</i>	235 D.
Richard Truman Percy	<i>New Haven, Conn.</i>	214 D.
George Frederick Peter	<i>St. Louis, Mo.</i>	210 D.
Stowe Phelps	<i>New York City</i>	248 L.
Robert Eston Phyfe	<i>Delhi, N. Y.</i>	219 York st.
Eugene Rockwell Pike	<i>Chicago, Ill.</i>	40 S. M.
Nathan Todd Porter, Jr.	<i>Montclair, N. J.</i>	201 D.
Harry Elbridge Pratt	<i>Chicago, Ill.</i>	122 N.
George Wadsworth Raynes	<i>Charlestown, Mass.</i>	141 F.
Charles Eliphalet Robbins	<i>Ruskey, N. Y.</i>	181 LYC.
Frederick William Robinson	<i>Auburn, N. Y.</i>	13 S.
Stuart Henry Rowe	<i>New Haven, Conn.</i>	30 Academy st.
Henry Manning Sage	<i>Albany, N. Y.</i>	274 L.
Leonard Cutler Sanford	<i>New Haven, Conn.</i>	216 Crown st.
David Scharps	<i>Newburgh, N. Y.</i>	138 F.
Henry Leo Scheuerman	<i>Griffin, Ga.</i>	138 F.
Ernest Lynde Selden	<i>Hadlyme, Conn.</i>	71 N. M.
Howard VanDoren Shaw	<i>Chicago, Ill.</i>	257 L.
Ralph Martin Shaw	<i>Lexington, Ky.</i>	122 N.
Thomas Bond Shaw	<i>Worcester, Mass.</i>	59 S. M.
Charles Alexander Sheldon	<i>Rutland, Vt.</i>	205 D.
Edward Minot Shelton	<i>Litchfield, Conn.</i>	191 C.
John Howard Sherwood	<i>Englewood, N. J.</i>	11 S.

Wallace Delafield Simmons	<i>St. Louis, Mo.</i>	203 D.
Charles Francis Small	<i>Pawtucket, R. I.</i>	104 N.
William Henry Smith	<i>New Haven, Conn.</i>	210 D.
William Howard Smith	<i>Ogden City, Utah</i>	81 N. M.
Percy Hamilton Stewart	<i>Plainfield, N. J.</i>	239 D.
John Henry Strong, B.A. }	<i>Rochester, N. Y.</i>	216 D.
Univ. of Rochester, 1889 }		
John Francis Sullivan	<i>New Haven, Conn.</i>	304 Exchange st.
James Willcox Thompson	<i>Bridgeport, Conn.</i>	256 L.
Ralph Thompson	<i>Schenectady, N. Y.</i>	32 S.
Albert Arthur Tilney	<i>Plainfield, N. J.</i>	274 L.
Evarts Tracy	<i>Plainfield, N. J.</i>	239 D.
Henry Veeder	<i>Chicago, Ill.</i>	85 N. M.
James Allen Warner	<i>Albany, N. Y.</i>	32 S.
George Swift Welch	<i>Gowanda, N. Y.</i>	62 S. M.
William White, Jr.	<i>Drifton, Pa.</i>	124 N.
Albert Jason Willson	<i>Marion, Ind.</i>	85 N. M.
Joseph Lafon Winchell	<i>New Haven, Conn.</i>	565 Orange st.
Lewis Bartholomew Woodruff	<i>New York City</i>	266 L.
Henry Sterne Woodward	<i>Washington, D. C.</i>	228 D.
George Dallas Yeomans	<i>Sioux City, Iowa</i>	255 L.
Samuel Albert York, Jr.	<i>New Haven, Conn.</i>	201 D.

SENIORS, 146

JUNIOR CLASS

Edward Walter Abell	<i>North Franklin, Conn.</i>	88 N. M.
Hildreth James Ackroyd	<i>Albany, N. Y.</i>	108 N.
George Irving Adams	<i>Westborough, Mass.</i>	25 S.
Thomas Gove Adams	<i>New Haven, Conn.</i>	88 N. M.
Alfred Lawrence Aiken	<i>Norwich, Conn.</i>	270 L.
Matthias Charles Arnot	<i>Elmira, N. Y.</i>	240 D.
Grosvenor Atterbury	<i>New York City</i>	71 W.
Gurdon Franklin Bailey	<i>Groton, Conn.</i>	116 N.
Albert Ruggles Baker	<i>Hartford, Conn.</i>	34 S. M.
Ernest Hickok Baldwin	<i>Cheshire, Conn.</i>	200 York st.
Cecil Kittredge Bancroft	<i>Andover, Mass.</i>	75 N. M.
Albert Hampton Barclay	<i>Pittsburgh, Pa.</i>	54 S. M.
John Sanford Barnes, Jr.	<i>New York City</i>	64 S. M.
James Foote Barnett	<i>Grand Rapids, Mich.</i>	134 F.
Walter Alden Barrows	<i>Westborough, Mass.</i>	92 N. M.
William Tenney Bartley	<i>Bridgeport, Conn.</i>	53 S. M.
Frank Sheridan Benninghoff	<i>Clyde, N. Y.</i>	27 S.

Louis Frederic Holbrook Betts	<i>New York City</i>	148 F.
David Lane Billings	<i>New York City</i>	211 D.
William Edward Billings	<i>New York City</i>	229 D.
Walter Kissam Birdsall	<i>Jersey City, N. J.</i>	159 F.
Frank Sanford Blair	<i>Angelica, N. Y.</i>	100 N.
James Kingsley Blake	<i>New Haven, Conn.</i>	249 L.
Elijah George Boardman	<i>Washington, D. C.</i>	131 F.
John Alden Bovey	<i>Minneapolis, Minn.</i>	168 F.
Joseph Bowden, Jr.	<i>New Haven, Conn.</i>	122 Rosette st.
William Lewis Bradley	<i>New Haven, Conn.</i>	139 Chestnut st.
John Matthews Brenner	<i>Dayton, O.</i>	68 W.
George Stephenson Brewster	<i>New York City</i>	278 L.
James Wallace Broatch	<i>Omaha, Nebr.</i>	145 F.
Charles Marshall Brown	<i>Pittsburgh, Pa.</i>	225 D.
Francis Theodore Brown	<i>Troy, N. Y.</i>	108 N.
William Arthur Brown	<i>Fitchburg, Mass.</i>	25 S.
John Henry Buck	<i>Hartford, Conn.</i>	57 S. M.
John Lee Bunce	<i>Hartford, Conn.</i>	277 L.
Curtis Clark Bushnell	<i>New Haven, Conn.</i>	19 Perkins st.
Levi Ives Bushnell	<i>New Haven, Conn.</i>	49 Howe st.
Gouverneur Calhoun	<i>Chicago, Ill.</i>	166 F.
Charles Gibbs Carter	<i>Titusville, Pa.</i>	146 F.
Ernest Chadwick	<i>Lyme, Conn.</i>	145 F.
Starling Winston Childs	<i>Pittsburgh, Pa.</i>	217 D.
Alfred Mainwaring Coats	<i>Providence, R. I.</i>	211 D.
Duane Phillips Cobb	<i>Kankakee, Ill.</i>	144 F.
Samuel Colgate, Jr.	<i>Orange, N. J.</i>	238 D.
Charles Parsons Cooley	<i>Hartford, Conn.</i>	238 D.
William Russell Cone Corson	<i>Hartford, Conn.</i>	234 D.
John Joughin Cox	<i>Bedford, N. Y.</i>	273 L.
Frank Crawford	<i>Colebrook, N. H.</i>	135 F.
Harvey Williams Cushing	<i>Cleveland, O.</i>	241 L.
William Sage Dalzell	<i>Pittsburgh, Pa.</i>	242 L.
Edgar William Danner	<i>Paterson, N. J.</i>	61 S. M.
Henry Murray Dater	<i>Brooklyn, N. Y.</i>	64 High st.
Carroll Preston Davis	<i>Pittsburgh, Pa.</i>	154 F.
Clarence Seward Davis	<i>Jersey City, N. J.</i>	44 S. M.
William Beach Dean	<i>New York City</i>	144 F.
Lyle Alexander Dickey	<i>Haiku, Maui, H. I.</i>	10 S.
Frank Ayer Dillingham	<i>Summit, N. J.</i>	253 L.
John Wesley Doane, Jr.	<i>Chicago, Ill.</i>	280 L.
Edward Payson Drew	<i>McIndoes Falls, Vt.</i>	38 S. M.
Henry Dunnell	<i>New York City</i>	130 F.
Louis Cazenove duPont	<i>Washington, Del.</i>	227 Crown st.
Richard Bancker Duyckinck, Jr.	<i>Morristown, N. J.</i>	61 S. M.

Charles Russell Ely	<i>Frederick City, Md.</i>	156 F.
Joe Garner Estill	<i>Winchester, Tenn.</i>	16 S.
James Eugene Farmer	<i>Cleveland, O.</i>	242 L.
Harry Tristram Ferris	<i>Riverside, Conn.</i>	17 S.
Parnell Ellis Fisher	<i>Hope Valley, R. I.</i>	39 S. M.
Russell Kennedy Forsyth	<i>Allegheny, Pa.</i>	217 D.
Reginald Foster	<i>New York City</i>	43 S. M.
Raymond Hilliard Gage	<i>Dover, N. J.</i>	38 S. M.
Nathan Glicksman	<i>Chippewa Falls, Wisc.</i>	164 F.
Deforest Grant	<i>New York City</i>	253 L.
Frederic William Grau	<i>Brooklyn, N. Y.</i>	552 Chapel st.
William Phillips Graves	<i>Andover, Mass.</i>	Dwight Hall
Ashbel Green, Jr.	<i>New York City</i>	208 D.
Paul Ecoff Greer	<i>Chicago, Ill.</i>	421 Temple st.
Franklin Underwood Gregory	<i>Brooklyn, N. Y.</i>	178 LYC.
Hippolyte Washington Gruener	<i>New Haven, Conn.</i>	75 N. M.
Thomas Hackett Guy	<i>Troy, N. Y.</i>	149 F.
Edwin Victor Hale	<i>Cleveland, O.</i>	271 L.
Charles Howard Hall	<i>Exeter, N. H.</i>	92 N. M.
Lewis Carroll Hall	<i>New Canaan, Conn.</i>	74 N. M.
Lane Schofield Hart	<i>Harrisburg, Pa.</i>	164 F.
Theodore Stuart Hart	<i>Farmington, Conn.</i>	45 S. M.
Perry Williams Harvey	<i>Cleveland, O.</i>	241 L.
George Pickard Hawkes	<i>New Haven, Conn.</i>	314 Crown st.
Joseph Eugene Hedges	<i>Oregon City, Oregon</i>	186 C.
George Henry Hefflon	<i>Deep River, Conn.</i>	9 S.
Joseph Rogers Herod	<i>Indianapolis, Ind.</i>	148 F.
William Thurston Hincks	<i>Bridgeport, Conn.</i>	135 F.
George Walter Hodges	<i>Bristol, Conn.</i>	16 S.
Herbert Wolcott Holcomb	<i>Omaha, Nebr.</i>	1010 Chapel st.
Louis Lawton Hopkins	<i>Boston, Mass.</i>	100 W.
Gerard Beekman Hoppin	<i>New York City</i>	64 S. M.
Edward Franklin Horr	<i>Bridgeport, Conn.</i>	53 S. M.
Hampton Pierson Howell	<i>West Hampton Center, N. Y.</i>	279 L.
Charles Prentice Howland	<i>New York City</i>	166 F.
James Coleman Ford Huntington	<i>New York City</i>	332 Temple st.
Robert Palmer Huntington, Jr.	<i>New York City</i>	332 Temple st.
Francis deLacey Hyde	<i>Plainfield, N. J.</i>	219 D.
Leland Ingersoll	<i>Cleveland, O.</i>	208 D.
Charles Samuel Ingham	<i>Saybrook, Conn.</i>	186 C.
Edward Swift Isham, Jr.	<i>Chicago, Ill.</i>	277 L.
Stuart Dodge Jessup	<i>Beyrout, Syria</i>	103 N.
Sherman Skinner Jewett	<i>Buffalo, N. Y.</i>	229 D.
Frederick Morgan Johnson	<i>Norwich, Conn.</i>	270 L.
Vertner Kenerson	<i>New Haven, Conn.</i>	91 N. M.

Edward Learned Kernochan	<i>Pittsfield, Mass.</i>	131 F.
Frederick Strong Kimball	<i>Hartford, Conn.</i>	254 L.
Howard Thayer Kingsbury	<i>New York City</i>	273 L.
Lewis Taylor Knox	<i>New Castle, Pa.</i>	163 F.
Howard LaField	<i>Bridgeport, Conn.</i>	34 S. M.
Albert Lee	<i>New York City</i>	280 L.
William Josiah Leverett	<i>Binghamton, N. Y.</i>	103 N.
Theodore Nelson Lillagore	<i>Philadelphia, Pa.</i>	39 S. M.
Joseph Potts Lloyd, Jr.	<i>East Orange, N. J.</i>	193 C.
Edward Nathaniel Loomis	<i>Brooklyn, N. Y.</i>	152 F.
John Frederic McBean	<i>Chicago, Ill.</i>	165 F.
Norman McClintock	<i>Pittsburgh, Pa.</i>	180 LYC.
Walter McClintock	<i>Pittsburgh, Pa.</i>	180 LYC.
Robert Gardner McClung	<i>Knoxville, Tenn.</i>	143 F.
Malcolm MacLear	<i>Wilmington, Del.</i>	159 F.
Edward Augustus Manice	<i>New York City</i>	9 Library st.
Charles Capron Marsh	<i>Rahway, N. J.</i>	1010 Chapel st.
Arthur Marvin	<i>Coopersdown, N. Y.</i>	9 Trumbull st.
Abraham Loeb May	<i>Brooklyn, N. Y.</i>	137 Meadow st.
Lafayette Benedict Mendel	<i>Delhi, N. Y.</i>	139 F.
William Revell Moody	<i>Northfield, Mass.</i>	132 F.
Samuel Wylie Black Moorhead	<i>Pittsburgh, Pa.</i>	225 D.
Richard Bartholomew Moriarty	<i>Putnam, Conn.</i>	107 N.
Samuel Benjamin Morison	<i>Minneapolis, Minn.</i>	224 D.
Sherman Morse	<i>Canandaigua, N. Y.</i>	149 F.
Wallace Simon Moyle	<i>Sharon, Mass.</i>	27 S.
Winthrop Sargent Gilman Noyes	<i>St. Paul, Minn.</i>	278 L.
Frank Richard Oastler	<i>New York City</i>	254 L.
Harry Leroy Pangborn	<i>Jersey City, N. J.</i>	44 S. M.
Amasa Junius Parker, 3d	<i>Albany, N. Y.</i>	236 D.
Willis Nathaniel Parker	<i>Niantic, Conn.</i>	189 C.
Charles Orrin Penfield	<i>Delhi, N. Y.</i>	54 S. M.
John Franklin Plummer, Jr.	<i>New York City</i>	230 D.
Robert Watson Pomeroy	<i>Auburn, N. Y.</i>	240 D.
William Frederick Poole, Jr.	<i>Evanston, Ill.</i>	134 F.
Albert Merriman Reed	<i>Manchester, Vt.</i>	10 S.
Adelbert Lee Reynolds	<i>Waterloo, N. Y.</i>	100 N.
William Castle Rhodes	<i>Cleveland, O.</i>	271 L.
James Perkins Richardson	<i>Kansas City, Mo.</i>	190 C.
George Phelps Robbins	<i>New York City</i>	249 L.
Allan Gold Robinson	<i>Scranton, Pa.</i>	130 F.
Frederick Harvey Robinson	<i>Corning, N. Y.</i>	119 N.
William Drown Rorer	<i>Philadelphia, Pa.</i>	189 C.
Arthur Benedict Russell	<i>South Norwalk, Conn.</i>	69 N. M.
Erastus Dean Ryder	<i>Plainfield, N. J.</i>	193 C.

Francis Williams Sacket	<i>Cape Vincent, N. Y.</i>	219 D.
William Henry St. John	<i>Hartford, Conn.</i>	272 L.
Daniel Seales, Jr.	<i>Cleveland, O.</i>	111 York st.
John Barry Sears	<i>Chicago, Ill.</i>	226 D.
Samuel Carter Shaw	<i>Redding Ridge, Conn.</i>	157 F.
Henry King Sheldon, Jr.	<i>Brooklyn, N. Y.</i>	7 Library st.
Edward Francis Simms	<i>Paris, Ky.</i>	215 D.
William Erskine Simms, Jr.	<i>Paris, Ky.</i>	215 D.
Hubbard Taylor Simpson	<i>Winchester, Ky.</i>	233 D.
Francis Louis Slade	<i>New York City</i>	279 L.
Clement Grubb Smith	<i>Joanna Furnace, Pa.</i>	233 D.
George Ferguson Smith	<i>Andover, Mass.</i>	146 F.
Herbert Knox Smith	<i>Hartford, Conn.</i>	45 S. M.
Ray Burdick Smith	<i>Lincklaen, N. Y.</i>	129 F.
George Howard Street	<i>Exeter, N. H.</i>	69 N. M.
Egerton Swartwout	<i>Stamford, Conn.</i>	57 S. M.
George Sherman Talcott	<i>New Britain, Conn.</i>	9 S.
Daniel Gleason Tenney	<i>New York City</i>	178 LYC.
William Nevin Thatcher	<i>Pueblo, Col.</i>	129 F.
Samuel Clifton Thompson	<i>Pottsville, Pa.</i>	252 L.
Edward Allen Thurber	<i>Syracuse, N. Y.</i>	268 L.
John Quillin Tilson	<i>Clenr Branch, Tenn.</i>	91 N. M.
John Barnes Townsend	<i>Silver Cliff, Col.</i>	224 D.
Alliene Wetmore Treadwell	<i>New Castle, Pa.</i>	157 F.
Luther Henry Tucker, Jr.	<i>Albany, N. Y.</i>	262 L.
Harry Hallam Tweedy	<i>Binghamton, N. Y.</i>	252 L.
Clifford Gray Twombly	<i>Boston, Mass.</i>	262 L.
Horace Garfield Waite	<i>Chicago, Ill.</i>	125 High st.
Frederick Collin Walcott	<i>New York Mills, N. Y.</i>	168 F.
Leonard Eugene Wales, Jr.	<i>Wilmington, Del.</i>	163 F.
George Stewart Walton	<i>Salem, O.</i>	152 F.
Hanford Smith Weed	<i>New Canaan, Conn.</i>	132 F.
Henry Crofut White	<i>New York City</i>	209 D.
Frederic Harrison Williams	<i>Brooklyn, N. Y.</i>	165 F.
Henry Lane Williams	<i>Hartford, Conn.</i>	156 F.
Charles Strong Witbeck	<i>Detroit, Mich.</i>	272 L.
Glen Wright	<i>Cincinnati, O.</i>	230 D.
Ira Platt Younglove	<i>Chicago, Ill.</i>	154 F.

JUNIORS, 190

SOPHOMORE CLASS

Harry Allen Grant Abbe	<i>Hartford, Conn.</i>	250 L.
Bernard Melzar Allen	<i>Walpole, Mass.</i>	188 C.
Benjamin Latham Armstrong	<i>New London, Conn.</i>	1157 Chapel st.
Clarence Willis Austin	<i>Suffield, Conn.</i>	312 Elm st.
George Sherwin Clarke Badger	<i>Boston, Mass.</i>	1010 Chapel st.
Andrew Jackson Balliet	<i>Lehigh, Pa.</i>	56 S. M.
Frank Melville Barber	<i>Wallingford, Conn.</i>	47 S. M.
Arthur Seth Barnes	<i>Bristol, Conn.</i>	82 N. M.
Charles Joseph Bartlett	<i>Barton Landing, Vt.</i>	66 N. M.
Hugh Aiken Bayne	<i>New Orleans, La.</i>	174 F.
Benjamin Franklin Bedford, Jr.	<i>Paris, Ky.</i>	1157 Chapel st.
Henry Mortimer Billings	<i>New York City</i>	1002 Chapel st.
Howbert Billman	<i>Killingworth, Conn.</i>	56 S. M.
Howard Morton Biscoe	<i>Westborough, Mass.</i>	106 N.
Frederic Courtney Bishop	<i>Bridgeport, Conn.</i>	49 S. M.
Edward Clarence Bissell	<i>Lakeville, Conn.</i>	22 S.
Walter Phelps Bliss	<i>New York City</i>	1010 Chapel st.
Edward Boltwood	<i>Pittsfield, Mass.</i>	177 F.
William Bradford Bosley	<i>Livonia, N. Y.</i>	65 N. M.
Herbert Ovid Bowers	<i>Manchester, Conn.</i>	6 S.
Arthur Stone Brackett	<i>Hartford, Conn.</i>	49 S. M.
Fred Clark Gallup Bronson	<i>Norwich, Conn.</i>	63 S. M.
Oliver Hart Bronson	<i>Rye, N. Y.</i>	109 High st.
Preston Brown	<i>Louisville, Ky.</i>	173 F.
Stanley Gano Burt	<i>Cincinnati, O.</i>	26 S.
James Trowbridge Carr	<i>Dubuque, Iowa</i>	265 L.
Alfred Bruce Chace	<i>Hudson, N. Y.</i>	312 Elm st.
Howell Cheney	<i>South Manchester, Conn.</i>	14 S.
Knight Dexter Cheney, Jr.	<i>South Manchester, Conn.</i>	14 S.
Paul Ripley Clark	<i>Auburn, N. Y.</i>	24 Howe st.
Ezekiel Field Clay	<i>Paris, Ky.</i>	1157 Chapel st.
George Lawton Coit	<i>Brooklyn, N. Y.</i>	1010 Chapel st.
George Wetmore Colles, Jr.	<i>Morristown, N. J.</i>	98 N.
Richard Storrs Colton	<i>Brooklyn, N. Y.</i>	89 N. M.
Elisha Hilliard Cooper	<i>New Britain, Conn.</i>	15 S.
Benjamin Lewis Crosby	<i>Halcott Center, N. Y.</i>	1010 Chapel st.
Stanley Douglas Curran	<i>Utica, N. Y.</i>	126 High st.
William Daniels	<i>Denver, Col.</i>	223 D.
James Stevens Darcy	<i>Springfield, Mass.</i>	63 S. M.
Arthur Louis Day	<i>Westborough, Mass.</i>	200 Grove st.
Clive Hart Day	<i>Hartford, Conn.</i>	174 F.
Albert Grant Dingley	<i>Lewiston, Me.</i>	1010 Chapel st.
Edward Howard Dodd	<i>Summit, N. J.</i>	433 Temple st.

Richard Gardner Eaton	Wakefield, Mass.	113 N.
Percy Coe Eggleston	New London, Conn.	140 F.
Roy Knight Farwell	Freeport, Ill.	140 F.
Percy Finlay	Memphis, Tenn.	285 York st.
Wilbur Parkhurst Fish	Elmira, N. Y.	269 L.
Otis Harrison Fisk	Covington, Ky.	146 College st.
Lawrence Bradford Fitch	Rochester, N. Y.	20 S.
Edward Henry Floyd-Jones	South Oyster Bay, N. Y.	270 Crown st.
Hiram Fobes	Salem, Conn.	84 N. M.
Everett Dwight Francis	West Hartford, Conn.	87 N. M.
William Buell Franklin	Lancaster, Pa.	1018 Chapel st.
Harrison Barber Freeman	Hartford, Conn.	15 S.
Charles Hamilton Frost	Plainfield, N. Y.	219 York st.
Pierpont Fuller	New Haven, Conn.	145 Olive st.
Merrill Williams Gallaway	New York City	252 York st.
George Herbert Girty	Cleveland, O.	84 Wall st.
Charles Andrew Graham	Denver, Col.	39 Lynwood st.
Fred Everett Grant	Brooklyn, N. Y.	1018 Chapel st.
Henry Solon Graves	Andover, Mass.	Dwight Hall
Francis Hayt Griffin	Springfield, Mass.	1018 Chapel st.
Stansbury Tiffany Hager	Brooklyn, N. Y.	A.
Charles Sherman Haight	Brooklyn, N. Y.	31 S.
William Cuthbert Hall, Jr.	Louisville, Ky.	173 F.
Henry Saunders Haskell	Norwich, Conn.	20 S.
William Stockbridge Haskell	West Falmouth, Me.	928 Chapel st.
Ferdinand Albert Hauslein	Genoa, Ill.	219 York st.
Logan Hay	Springfield, Ill.	1018 Chapel st.
Frederic Asbury Hill	Norwalk, Conn.	1010 Chapel st.
Donald Rose Hinckley	Northampton, Mass.	46 S. M.
Henry Barrett Hinckley	Northampton, Mass.	46 S. M.
Frederick Wallis Hinkle	Cincinnati, O.	23 S.
Charles Revell Holden	Chicago, Ill.	1010 Chapel st.
Burton Page Hollister	Cincinnati, O.	1018 Chapel st.
George Buell Hollister	Rutherford, N. Y.	176 F.
Sidney Hosmer	New York City	1010 Chapel st.
Willard Evans Hoyt	Stamford, Conn.	1010 Chapel st.
Arthur Carter Hume	Poughkeepsie, N. Y.	23 S.
Daniel Trumbull Huntington	Hartford, Conn.	251 L.
Howard Huntington	Plainfield, N. Y.	1010 Chapel st.
James William Husted, Jr.	Peekskill, N. Y.	86 W.
James W. D. Ingersoll	Marengo, Ill.	90 Park st.
William Crane Ivison	New York City	176 F.
Pierre Jay	New York City	183 L.Y.C.
Isaac Hallam Jenney	New York City	1018 Chapel st.
Elliot Grant Johnson	Groton, Conn.	83 Grove st.

Frank Arthur Keller	Fort Plain, N. Y.	72 W.
Harry Howell Kennedy	Syracuse, N. Y.	269 L.
Henry Martindale Kidd	Albany, N. Y.	1018 Chapel st.
William Lloyd Kitchel	New Haven, Conn.	169 F.
Paul Klimpke	Hartford, Conn.	101 N.
George Gray Knowles	Wilmington, Del.	7 Library st.
Sidney Locock Lasell	Orange, N. Y.	1010 Chapel st.
Phillip Reynolds Leavenworth	Castleton, Vt.	4 S.
Arthur Franklin Lewis	Bozeman, Mont.	85 Admiral st.
Harry Long	Wilkes-Barre, Pa.	139 F.
John Frederick Lorange	New Haven, Conn.	67 N. M.
Daniel Lord, 3d	New York City	227 D.
Arthur Lovell	Plainfield, N. Y.	22 S.
Harry Winters Luce	Scranton, Pa.	35 High st.
Harry Stoddard Lyman	Salt Lake City, Utah	29 S.
Cloyd North McAllister	St. Joseph, Mo.	90 N. M.
Thomas Lee McClung	Knoxville, Tenn.	143 F.
Henry Buehler McCormick	Harrisburg, Pa.	1010 Chapel st.
William Maffitt	St. Louis, Mo.	1010 Chapel st.
Daniel Edgar Manson	New Haven, Conn.	189 Columbus av.
Arthur Merwin Marsh	Bridgeport, Conn.	76 N. M.
Elliott Marshall	Montclair, N. Y.	76 N. M.
Levi Winfield Marshall	Middleboro, Mass.	65 N. M.
Loren Pinckney Waldo Marvin	Hartford, Conn.	251 L.
Edward Hopkins Mason	Chicago, Ill.	177 F.
William Messick, Jr.	Memphis, Tenn.	312 Elm st.
Abraham Meyer	Chicago, Ill.	264 L.
Ernest Boyd Millard	Rochester, N. Y.	364 George st.
George Redington Montgomery	Adana, Turkey	34 Trumbull st.
Francis Miner Moody	New Haven, Conn.	Fair Haven H'ghts
James Albert Moore	Norwich, N. Y.	37 S. M.
Stanford Newel Morison	Minneapolis, Minn.	1018 Chapel st.
Charles Dennis Morris	Wallingford, Conn.	35 High st.
Robert Wallace Morris	Wallingford, Conn.	47 S. M.
Edward Buffett Mowbray	Bay Shore, N. Y.	1138 Chapel st.
Thornwell Mullally	Scotland, S. Dak.	48 S. M.
David Raphael O'Donnell	New Haven, Conn.	30 Ward st.
Allen Cromwell Orrick	St. Louis, Mo.	1010 Chapel st.
Frank Burton Otis	Meriden, Conn.	Meriden
Robert Allan Paddock	St. Louis, Mo.	48 S. M.
Alfred Barnes Palmer	Bridgeport, Conn.	307 George st.
Lewis Rathbone Parker	Albany, N. Y.	236 D.
Edward Walker Pease	Cleveland, O.	1 S.
John Inglee Phinney	Machias, Me.	99 N.
Charles Peabody Pierce	Hardwick, Mass.	188 C.

Horace Tracy Pitkin	<i>Philadelphia, Pa.</i>	1010 Chapel st.
Ralph Carr Powell	<i>Cincinnati, O.</i>	1010 Chapel st.
Frank Julian Price	<i>Brooklyn, N. Y.</i>	142 F.
Henry Riggs Rathbone	<i>Albany, N. Y.</i>	68 N. M.
Matthew Ambrose Reynolds	<i>New Haven, Conn.</i>	550 Whalley av.
Isaac Woodbridge Riley	<i>New Haven, Conn.</i>	433 Temple st.
William Nelson Runyon	<i>Plainfield, N. J.</i>	1010 Chapel st.
George Emery Russell	<i>Sarnia, Ontario, Canada</i>	219 York st.
Ernest Ryle	<i>Paterson, N. J.</i>	1018 Chapel st.
Edward Stevens Sanborn	<i>Kingston, N. H.</i>	99 N.
Otto Adolph Schreiber	<i>Hoboken, N. J.</i>	227 D.
Charles Augustus Schumaker	<i>Parish, N. Y.</i>	84 N. M.
Charles Brown Sears	<i>Brooklyn, N. Y.</i>	31 S.
Frank Wright Seymour	<i>Winsted, Conn.</i>	1 S.
Arthur Wynne Shaw	<i>Paterson, N. J.</i>	55 S. M.
Augustus Farnham Shaw	<i>Wellsboro, Pa.</i>	190 C.
Forrest Shepherd	<i>Hartford, Conn.</i>	142 F.
William Gay Skiddy	<i>Stamford, Conn.</i>	29 S.
Emanuel Frank Snyder	<i>Chicago, Ill.</i>	264 L.
Elmer Haynes Spaulding	<i>New London, Conn.</i>	1157 Chapel st.
Alfred Lawrence Spencer	<i>New Haven, Conn.</i>	1144 Chapel st.
Edwin Obed Stanard, Jr.	<i>St. Louis, Mo.</i>	265 L.
Walter Ralph Steiner	<i>Baltimore, Md.</i>	169 F.
Eben Foster Stevens	<i>New York City</i>	55 S. M.
Herbert Anson Stocking	<i>Wallingford, Conn.</i>	87 N. M.
Alfred Harris Swayne	<i>New York City</i>	223 D.
Martin John Synnett	<i>Montclair, N. J.</i>	37 S. M.
Harlan Henry Taintor	<i>Hartford, Conn.</i>	250 L.
Harrison John Teller	<i>Central City, Col.</i>	109 Elm st.
George Davis Terry	<i>Brooklyn, N. Y.</i>	212 D.
Alfred Clark Thompson	<i>Willimantic, Conn.</i>	4 S.
John Knox Tibbits	<i>Troy, N. Y.</i>	41 High st.
Howard Rockwell Townsend	<i>New York City</i>	26 S.
Tom Cann Trask	<i>Scranton, Pa.</i>	35 High st.
Frederick Deming Tucker	<i>Monson, Mass.</i>	113 N.
Ralph Richard Upton	<i>Washington, D. C.</i>	124 W.
Warren Gookin Waterman	<i>Southport, Conn.</i>	84 Wall st.
George Huntington Webster, Jr.	<i>Chicago, Ill.</i>	1076 Chapel st.
Henry Goodwin Webster	<i>Brooklyn, N. Y.</i>	89 N. M.
Stuart Webster	<i>Chicago, Ill.</i>	159 York st.
Albert Galusha Weeks	<i>New York City</i>	1010 Chapel st.
Irving Comstock West	<i>Plainfield, N. J.</i>	1010 Chapel st.
James Everett Wheeler	<i>New Haven, Conn.</i>	7 Library st.
Albert Lavine Whittaker	<i>Wallingford, Conn.</i>	Wallingford
Norman Clark Whittemore	<i>Rye, N. Y.</i>	41 High st.

Abram Case Williams	<i>East Hartford, Conn.</i>	6 S.
Clarence Cicero Wilson	<i>Avon, Conn.</i>	17 S.
Frank Tobey Winslow	<i>Watertown, N. Y.</i>	109 Elm st.
Charles Lawson Wooding	<i>Bristol, Conn.</i>	82 N. M.
Frederick Sanford Woodruff	<i>New York City</i>	266 L.
John Sticher Woodruff	<i>New York City</i>	1010 Chapel st.
Harry Woollen	<i>Indianapolis, Ind.</i>	212 D.
William Burnet Wright, Jr.	<i>New Britain, Conn.</i>	124 W.
Herbert James Wyckoff	<i>Woodbury, Conn.</i>	146 College st.
William Denison Young	<i>New York City</i>	226 D.

SOPHOMORES, 188

FRESHMAN CLASS

Franklin Jones Abbe	<i>Hartford, Conn.</i>	281 L.
Henry Crosby Allen	<i>Paterson, N. J.</i>	120 York st.
John Weston Allen	<i>New Haven, Conn.</i>	104 York sq.
Lafon Allen	<i>Louisville, Ky.</i>	60 S. M.
Joseph Anderson, Jr.	<i>Waterbury, Conn.</i>	231 York st.
Christopher Lester Avery	<i>Groton, Conn.</i>	116 N.
John Whitney Avery	<i>New Haven, Conn.</i>	109 High st.
James Addison Babbitt	<i>West Brattleboro', Vt.</i>	127 N.
Henry Selden Bacon	<i>Rochester, N. Y.</i>	27 High st.
Henry Burr Barnes, Jr.	<i>New York City</i>	90 High st.
Ellery Alphonso Bates	<i>Windham, Conn.</i>	48 Gill st.
Henry Colwell Beadleston	<i>New York City</i>	252 York st.
George Palmer Beebe	<i>Norfolk, Conn.</i>	74 N. M.
William Begg	<i>Hendersonville, N. C.</i>	94 N. M.
Ralph Birdsall	<i>Los Angeles, Cal.</i>	127 Howe st.
Harry Llewellyn Bixby	<i>Long Beach, Cal.</i>	130 Wall st.
Clifford Douglass Bliss	<i>New York City</i>	231 York st.
William Bradford Boardman	<i>New Britain, Conn.</i>	110 N.
Gerald Mark Borden	<i>Chicago, Ill.</i>	265 Orange st.
Charles Wilder Bosworth	<i>Springfield, Mass.</i>	99 Wall st.
Harry Howard Bottome	<i>New York City</i>	43 S. M.
Howard Sidney Bowns	<i>Brooklyn, N. Y.</i>	168 York st.
Henry Dana Bradley	<i>New Haven, Conn.</i>	Main st. (Annex)
William Edwin Breckenridge	<i>Palmer, Mass.</i>	127 Howe st.
Thomas Hamilton Breeze	<i>San Francisco, Cal.</i>	38 Lynwood st.
Frederic Keith Bremner	<i>Boxford, Mass.</i>	261 L.
George Justus Briggs	<i>Danielsonville, Conn.</i>	3 College st.
Theodore Louis Bristol	<i>Ansonia, Conn.</i>	1079 Chapel st.
Edward Harold Bronson	<i>Norwich, Conn.</i>	80 N. M.

Frank James Brown	Warren, Pa.	15 Wall st.
Lawrence Edward Brown	New York City	552 Chapel st.
Cornelius Sanford Bull	Terryville, Conn.	260 L.
Ross Burchard	South Norwalk, Conn.	59 Grove st.
Louis Hood Burrell	Freeport, Ill.	111 N.
Frank Howard Button	Peekskill, N. Y.	29 High st.
Nehemiah Candee	Easton, Conn.	15 Wall st.
Jacob Hagar Carfrey	Milford, N. J.	90 N. M.
Otho Granford Cartwright	Belmont, N. Y.	318 Elm st.
Thomas Ives Chatfield	Owego, N. Y.	86 Broadway
Alvah Stone Chisholm	Cleveland, O.	64 High st.
Charles Walker Clark	Butte City, Mont.	111 York st.
John Darling Clarke	Canterbury, Conn.	96 N. M.
James Barclay Cooke	Paterson, N. J.	270 Crown st.
Joseph Platt Cooke	Oakland, Cal.	250 York st.
Benjamin Frank Corwin	Baiting Hollow, N. Y.	281 L.
John Smith Cravens	Kansas City, Mo.	64 High st.
George Mason Creevey	Brooklyn, N. Y.	42 Nichol st.
Beecher Maynard Crouse	Utica, N. Y.	168 York st.
Elliot Stone Curtis	Tidioute, Pa.	223 York st.
Robert Kerr Dickerman	Foxboro, Mass.	126 N.
Jonathan Boynton Dill	Clearfield, Pa.	242 York st.
Frank Edward Donnelly	Oxford, N. Y.	37 S. M.
Francis Oswald Dorsey	Indianapolis, Ind.	103 Wall st.
James Edward Drake	Bath, Me.	112 N.
Richard Edward Dunham	Warren, Pa.	64 Center st.
Henry Rutherford Dwight	Brooklyn, N. Y.	60 Trumbull st.
James Schneider Dwight	Poughkeepsie, N. Y.	103 Wall st.
Winthrop Edwards Dwight	New Haven, Conn.	126 College st.
William Walton Eccles	Auburn, N. Y.	231 York st.
Charles Brown Eddy	New Britain, Conn.	313 York st.
John Percival Edmison	Sioux Falls, S. Dak.	1150 Chapel st.
John Leonard Emerson	Titusville, Pa.	231 York st.
Archer Linwood Faxon	Holbrook, Mass.	120 Dwight st.
Charles Jarvis Fay	Hartford, Conn.	111 York st.
Irving Bruce Ferguson	New York City	313 York st.
Henry Horlbeck Ficken	Charleston, S. C.	242 York st.
John Howe Field	Rutland, Vt.	126 N.
Harrison Woodbury Flint	Danbury, Conn.	556 Chapel st.
George Mark Foos	Springfield, O.	1010 Chapel st.
Albert Nelson Cheney Fowler	Glens Falls, N. Y.	223 York st.
Arthur Benjamin Fox	Morristown, N. J.	159 York st.
James Charles Fox	Clinton, Conn.	111 N.
Clinton Hart Furbish	Lockport, N. Y.	366 Elm st.
Edson Fessenden Gallaudet	Washington, D. C.	282 L.

Thomas Augustus Gardiner	Brooklyn, N. Y.	159 York st.
Frank Edwin Gatchel	Louisville, Ky.	60 s. m.
Rufus Macqueen Gibbs	Baltimore, Md.	203 York st.
Montgomery Gibson	High Bridge, N. Y.	1010 Chapel st.
Giles Frederic Goodenough	Winchester, Conn.	36 Gilbert av.
James Edward Grafton	Norwich, Conn.	141 Chestnut st.
Arthur Lawrence Greer	New York City	170 York st.
William Henry Hackett	New Haven, Conn.	157 West st.
Donald Cameron Haldeman	Harrisburg, Pa.	192 York st.
Robert Rockwell Hall	Philadelphia, Pa.	168 York st.
Miles Tracy Hand	Scranton, Pa.	109 N.
Clarence Clifford Harmstad	Jersey City, N. J.	168 York st.
Frank John Harris	New York City	158 F.
Samuel Brainard Hartwell	Oil City, Pa.	161 York st.
Allyn Fitch Harvey	Cleveland, O.	254 York st.
Theodore Woolsey Heermance	White Plains, N. Y.	250 Church st.
Charles Ralph Hickox, Jr.	New York City	251 Crown st.
William McKimmie Higgins	Thompsonville, Conn.	93 N. M.
James Norman Hill	St. Paul, Minn.	158 F.
John Payson Hobbie	Cazenovia, N. Y.	128 High st.
Ben Hodge	St. Paul, Minn.	9 Library st.
Richard Thayer Holbrook	Yonkers, N. Y.	162 F.
William Wilder Hopkins	Geneva, N. Y.	3 S.
Robert Kellogg Howe	South Windsor, Conn.	285 York st.
Richard Earle Hurgren	Portland, Oregon	552 Chapel st.
John LeRoy Hurlbert	Forestville, N. Y.	80 N. M.
Shubael Cady Hutchins	Danielsonville, Conn.	96 N. M.
Sherwood Bissell Ives	New York City	203 York st.
Harry Benjamin Jepson	New Haven, Conn.	30 Grove st.
Edward Crandall Johnson	Norwich, Conn.	231 Martin st.
Lewis Fuller Johnson	Bangor, Me.	127 N.
Richard Harvey Johnson	Boisé City, Idaho	215 Crown st.
Alfred Henry Jones	St. Louis, Mo.	1090 Chapel st.
Charles Davies Jones	Cincinnati, O.	27 High st.
Riverda Harding Jordan	St. Joseph, Mo.	1187 Chapel st.
Homer Thrall Joy	Newark, N. J.	121 York st.
Walter Parmelee Judson	New Haven, Conn.	204 Winthrop av.
Charles David Kyle	Cayuga, N. Y.	24 Howe st.
Adrian VanSinderen Lambert	New York City	261 L.
Edwin Ruthven Lamson	Montclair, N. J.	125 N.
William Judson Lamson	Montclair, N. J.	125 N.
Irwin Boyle Laughlin	Pittsburgh, Pa.	217 York st.
Burton Emerson Leavitt	New Haven, Conn.	48 Gill st.
Henry Hamilton Lewis	Louisville, Ky.	161 F.
James Patrick Linahan	New Haven, Conn.	271 Ferry st.

Frederick Merwin Lloyd	New Haven, Conn.	26 Dwight pl.
Arthur Power Lord	New York City	1079 Chapel st.
Robert Oliver Lowry	Erie, Pa.	232 D.
Charles Mathew Ludwig	Winona, Minn.	29 High st.
Irving Phillips Lyon	Hartford, Conn.	260 L.
William James McKenna	Westborough, Mass.	77 N. M.
Stuart McKnight	Louisville, Ky.	7 Library st.
Arthur James Martin	Deckertown, N. J.	312 George st.
George Greene Martin	St. Louis, Mo.	133 College st.
Walter Rumsey Marvin	Pittsburgh, Pa.	82 Wall st.
Alfred Kindred Merritt	Brainerd, Minn.	120 Dwight st.
Guy Bryan Miller	New Rochelle, N. Y.	289 York st.
Winlock William Miller	Olympia, Wash.	82 Wall st.
Charles William Mills	Denver, Col.	39 Lynwood st.
George Edward Mills	Norwood, O.	233 York st.
Franklin Arthur Moore	Detroit, Mich.	130 Wall st.
John Stanley Moore	Syracuse, N. Y.	106 Wall st.
John Hill Morgan	Brooklyn, N. Y.	203 York st.
Albert Hooker Morse	Plantsville, Conn.	119 N.
William Henry Murphy	Southville, Mass.	77 N. M.
Alfred Goldstein Nadler	New Haven, Conn.	122 Olive st.
Emerson Root Newell	Bristol, Conn.	110 N.
William Lewis Newton	Brooklyn, N. Y.	116 High st.
William Allan Osborn	Cleveland, O.	64 High st.
Ralph Delahay Paine	New Haven, Conn.	65 Grove st.
Terry Parker	Atchison, Kan.	297 Crown st.
Francis Parsons	Hartford, Conn.	282 L.
George Leete Peck	Jamaica, N. Y.	West Haven
Alton William Peirce	Athol Center, Mass.	79 N. M.
Albert Wells Pettibone, Jr.	LaCrosse, Wisc.	231 York st.
Charles Macauley Pope	St. Louis, Mo.	1090 Chapel st.
Albert Hutchinson Putney	Newton Highlands, Mass.	104 York sq.
Harry Campbell Quintard	Sound Beach, Conn.	78 N. M.
Gerald Laurence Rathbone	Albany, N. Y.	68 N. M.
Alphonse George deRiesthal	Brooklyn, N. Y.	552 Chapel st.
John Trumbull Robinson	Hartford, Conn.	90 High st.
Joseph Roby	Rochester, N. Y.	128 High st.
Derby Rogers	New York City	128 N.
Robert Edwin Rowley	Williamsport, Pa.	192 York st.
Wilkins Rustin	Omaha, Nebr.	114 High st.
Herbert Irving Sackett	New Haven, Conn.	24 College st.
William Clement Scott	Newburgh, N. Y.	335 Orange st.
Samuel Scoville, Jr.	Stamford, Conn.	109 N.
Hubert Merrill Sedgwick	Bondsville, Mass.	127 Howe st.
Lucien Sharpe, Jr.	Providence, R. I.	121 Elm st.

Albert Judson Shaw	<i>Royalston, Mass.</i>	318 Orange st.
George Theron Slade	<i>New York City</i>	60 Trumbull st.
William Warren Smith	<i>Buffalo, N. Y.</i>	82 Wall st.
George Brown Spalding	<i>Syracuse, N. Y.</i>	161 F.
Samuel Reid Spencer	<i>Suffield, Conn.</i>	347 York st.
Henry Crosby Stetson	<i>Bangor, Me.</i>	162 F.
Robbins Battell Stoeckel	<i>New Haven, Conn.</i>	209 York st.
Wendell Melville Strong	<i>Montclair, N. J.</i>	85 Ward st.
Carlyle Edgar Sutphen, Jr.	<i>Newark, N. J.</i>	30 Academy st.
Noah Haynes Swayne, 2d	<i>New York City</i>	232 D.
Frederic Behm Taintor	<i>New York City</i>	155 Elm st.
Moses Taylor	<i>New York City</i>	231 D.
William Stoutenborough Terriberry	<i>Paterson, N. J.</i>	120 York st.
John Booth Thomas	<i>Rockville, Conn.</i>	95 N. M.
Herbert Gordon Thomson	<i>New York City</i>	128 N.
William Preston Thornton	<i>Lexington, Ky.</i>	90 High st.
Charles Holmes Thrall	<i>Rockville, Conn.</i>	95 N. M.
Dexter Edgar Tilley	<i>W. Springfield, Mass.</i>	103 Liberty st.
Horace Gates Torbert	<i>Dubuque, Iowa</i>	231 York st.
Robert Storer Tracy	<i>Plainfield, N. J.</i>	242 York st.
Charles Gallaudet Trumbull	<i>Philadelphia, Pa.</i>	112 N.
Corydon Curtiss Tyler	<i>New York City</i>	3 College st.
Harry Selden Vaile	<i>Oak Park, Ill.</i>	120 Dwight st.
William Henry Vanderbilt	<i>New York City</i>	231 D.
Albert Leverett VanHuyck	<i>Lee, Mass.</i>	78 N. M.
Isidore Wachsman	<i>Albany, N. Y.</i>	407 Temple st.
Robert Buchanan Wade	<i>St. Louis, Mo.</i>	84 Wall st.
Richard Charles Wells Wadsworth	<i>Stapleton, N. Y.</i>	122 Howe st.
James Alexander Waller	<i>Chicago, Ill.</i>	254 Crown st.
Alexander Hamilton Wallis	<i>East Orange, N. J.</i>	1142 Chapel st.
Pere Gustav Wallmo	<i>Portland, Conn.</i>	26 Howe st.
John Dorrance Warnock	<i>Geneva, N. Y.</i>	3 S.
Lemuel Aikin Welles	<i>Newington, Conn.</i>	93 N. M.
Maurice Chauncey Wells	<i>Louisville, Ky.</i>	92 W.
Arthur Leslie Wheeler	<i>Hartford, Conn.</i>	94 N. M.
Junius Wheeler	<i>Chicago, Ill.</i>	266 George st.
Shelton King Wheeler	<i>Chattanooga, Tenn.</i>	250 York st.
Webster Wheelock	<i>St. Paul, Minn.</i>	242 York st.
Albert Beebe White	<i>Holbrook, Mass.</i>	199 York st.
Ellsworth Daggett Whiting	<i>Aurora, Ill.</i>	364 George st.
John Harvey Wigginton	<i>Bladensburg, Md.</i>	12 Martin st.
Walter Dwight Wilcox	<i>Washington, D. C.</i>	143 York st.
Frank Curtis Wilder	<i>New York City</i>	29 Whalley av.
Walter Jones Willard	<i>Washington, D. C.</i>	276 Crown st.
Edward Mason Williams	<i>Cleveland, O.</i>	254 York st.

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Yale College

[1889-90

Alfred Charles Woolner
Wilbur Seaman Wright
Frederick Washburn Yates

Peoria, Ill.
Greenwich, Conn.
Plainfield, N. J.

12 Whalley av.
79 N. M.
242 York st.

FRESHMEN, 212

SUMMARY

SENIORS	146
JUNIORS	190
SOPHOMORES	188
FRESHMEN	212
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SHEFFIELD SCIENTIFIC SCHOOL

GRADUATE STUDENTS

Arthur Chambers Alexander, PH.B. } Yale University, 1889	<i>Honolulu, H. I.</i>	57 N. S. H.
William Lucius Armstrong, B.A. } Yale University, 1889	<i>Chicago, Ill.</i>	86 Wall st.
Edwin Kirk Dillingham, PH.B. } Yale University, 1889	<i>New Orleans, La.</i>	90 Wall st.
Harootune Enfiajian, PH.B. } Yale University, 1889	<i>Harpoot, Turkey</i>	20 Insurance B'ld'g.
Oliver Cummings Farrington, M.S. } Maine State College, 1888	<i>Portland, Me.</i>	78 B.
Irving Fisher, B.A. } Yale University, 1888	<i>New Haven, Conn.</i>	119 Park st.
Matthew Griswold, Jr., PH.B. } Yale University, 1888	<i>Erie, Pa.</i>	A.
John Augustus Hartwell, PH.B. } Yale University, 1889	<i>Unionville, N. Y.</i>	88 Wall st.
Felix Kleeberg, PH.B. } Yale University, 1888	<i>New Haven, Conn.</i>	28 Home pl.
Edwin Hoyt Lockwood, PH.B. } Yale University, 1888	<i>New Canaan, Conn.</i>	57 N. S. H.
William Ellison Lockwood, M.D. } Yale University	<i>New Haven, Conn.</i>	32 Pearl st.
Boynton Wells McFarland, PH.B. } Yale University, 1889	<i>New Haven, Conn.</i>	306 Lawrence st.
George Wellington Miles, PH.B. } Yale University, 1889	<i>Milford, Conn.</i>	Milford
Edwin Morrison, PH.B. } Yale University, 1888	<i>Cincinnati, O.</i>	132 Wall st.
Amos L. Schaeffer, B.A. } Franklin & Marshall College, 1889	<i>Fleetwood, Pa.</i>	419 Temple st.
Paul Sheaffer, PH.B. } Yale University, 1889	<i>Pottsville, Pa.</i>	36 Elm st.
James Alward Seymour, PH.B. } Yale University, 1885	<i>Auburn, N. Y.</i>	A.
Ernest Ellsworth Smith, PH.B. } Yale University, 1888	<i>New Haven, Conn.</i>	1018 Chapel st.
Percy Franklin Smith, PH.B. } Yale University, 1888	<i>New Haven, Conn.</i>	13 Home pl.
Erwin Starr Sperry, PH.B. } Yale University, 1887	<i>Ansonia, Conn.</i>	Ansonia
Charles Emerson Stone, PH.B. } Yale University, 1889	<i>Spencer, Mass.</i>	16 S. H.
George Lincoln Teller, B.S. } Michigan Agricultural College, 1888	<i>Colon, Mich.</i>	379 Crown st.
William Conquest Tucker, PH.B. } Yale University, 1888	<i>New York City</i>	A.
Morgan Walcott, PH.B. } Yale University, 1888	<i>New York City</i>	1161 Chapel st.

SENIOR CLASS

Philip Allen	<i>Providence, R. I.</i>	227 Crown st.
Cyrus Morgan Arnold	<i>New York City</i>	215 Crown st.
George Perkins Bissell, Jr.	<i>Wilmington, Del.</i>	42 Elm st.
Theodore Whitney Blake	<i>Whitneyville, Conn.</i>	Whitneyville
Wendell Phillips Brown	<i>Plainfield, Conn.</i>	59 Grove st.
Horace Ray Burritt	<i>New Haven, Conn.</i>	54 Edwards st.
William Harper Butler	<i>Olean, N. Y.</i>	248 York st.
Robert Lockwood Casement	<i>Painesville, O.</i>	43 College st.
Horace Bushnell Cheney	<i>South Manchester, Conn.</i>	133 College st.
John Platt Cheney	<i>South Manchester, Conn.</i>	131 Grove st.
Ralph Roger Clapp	<i>Pawtucket, R. I.</i>	395 Temple st.
Clarence Beverly Davison	<i>New York City</i>	43 College st.
Harry Goodyear Day	<i>Seymour, Conn.</i>	152 Grove st.
Nelson Lloyd Deming	<i>Danbury, Conn.</i>	88 Wall st.
Walter Dodge	<i>Stamford, Conn.</i>	18 Trumbull st.
Robert Metcalf Dodsworth	<i>Los Angeles, Cal.</i>	18 Trumbull st.
Harrison Irwin Drummond	<i>St. Louis, Mo.</i>	131 Grove st.
Julian DuBois	<i>Hudson, N. Y.</i>	42 Elm st.
Alexander William Evans	<i>New Haven, Conn.</i>	12 High st.
Ralph Schuyler Goodwin, Jr.	<i>Thomaston, Conn.</i>	395 Temple st.
Neil Gray, Jr.	<i>Oswego, N. Y.</i>	225 Crown st.
Everett Gallup Griggs	<i>Tacoma, Wash.</i>	131 Grove st.
Charles Newton Gunn	<i>New Haven, Conn.</i>	255 York st.
Joseph Barnard Hall	<i>Hartford, Conn.</i>	36 Elm st.
Lawrence Heyworth	<i>Chicago, Ill.</i>	43 College st.
Theodore Dudley Irwin	<i>Albany, N. Y.</i>	88 Wall st.
Adrian Muller Isham	<i>New York City</i>	43 College st.
Walter Tracy Ives	<i>Montreal, Canada</i>	132 Wall st.
William Francis Judson	<i>New York City</i>	43 College st.
Elbridge Byron Keith	<i>Chicago, Ill.</i>	132 Wall st.
William Matthew Kenna	<i>New Haven, Conn.</i>	440 State st.
Charles Louis Kirschner	<i>New Haven, Conn.</i>	94 Prospect st.
Harvey Merrill Lawson	<i>Union, Conn.</i>	57 Prospect st.
Franklin Lyman Lawton	<i>Meriden, Conn.</i>	Meriden
Eugene Lentilhon	<i>New York City</i>	42 Elm st.
Oliver Smith Lyford, Jr.	<i>Chicago, Ill.</i>	88 Wall st.
Herbert McBride	<i>Cleveland, O.</i>	43 College st.
Frank Dunlevy McCaulley	<i>New York City</i>	131 Grove st.
John Carter Machale	<i>Sawyer City, Pa.</i>	248 York st.
Henry Porter McKnight	<i>Louisville, Ky.</i>	36 Elm st.
Frank Aloysius Maloney	<i>New Haven, Conn.</i>	34 Ferry st.
Frederick James Mann	<i>Utica, N. Y.</i>	126 High st.
William Crosby Marshall	<i>Cromwell, Conn.</i>	65 Grove st.

James Moorhead Murdoch	<i>Pittsburgh, Pa.</i>	131 Grove st.
Paul Nash	<i>Westport, Conn.</i>	59 Grove st.
Edgar Burr Northrup	<i>Broadalbin, N. Y.</i>	248 York st.
Alfred Walling Ogden	<i>Keyport, N. J.</i>	286 Norton st.
Charles Augustus Otis, Jr.	<i>Cleveland, O.</i>	43 College st.
Gaius Foster Paddock	<i>St. Louis, Mo.</i>	131 Grove st.
Robert Ellsworth Peck	<i>New Haven, Conn.</i>	486 Elm st.
John Frederick Pennell	<i>New Haven, Conn.</i>	109 High st.
John Conover Powell	<i>Dayton, O.</i>	248 York st.
Frank Russell Rich	<i>New Haven, Conn.</i>	369 Shelton av.
Charles Talbot Richmond	<i>Providence, R. I.</i>	225 Crown st.
William Sterling Roby	<i>Rochester, N. Y.</i>	43 College st.
Charles Francis Rogers	<i>New Canaan, Conn.</i>	43 College st.
Edwin Rowe, Jr.	<i>New Haven, Conn.</i>	411 Orange st.
Ernest Elisha Severy	<i>Waterbury, Conn.</i>	57 Prospect st.
Chester Burdell Shepard	<i>Middletown, Conn.</i>	65 w.
William Alexander Simms	<i>Dayton, O.</i>	248 York st.
George Jarvis Spencer	<i>Old Saybrook, Conn.</i>	41 Temple st.
Walter Tuttle Spencer	<i>Guilford, Conn.</i>	65 w.
Charles Bailey Spruce	<i>Kenosha, Wisc.</i>	36 Elm st.
Frederic Clark Strong	<i>Winsted, Conn.</i>	36 Elm st.
John Clayton Tracy	<i>Fair Haven, Conn.</i>	299 Center st., F. H.
Albert Milford Turner	<i>Northfield, Conn.</i>	265 Orange st.
John McKee Verboeff	<i>Louisville, Ky.</i>	Tontine Hotel
Henry Lord Wheeler	<i>Chicago, Ill.</i>	132 Wall st.
Frederick Wareham Williams	<i>Norwich, Conn.</i>	131 Grove st.
		SENIORS, 69

JUNIOR CLASS

William Adams, Jr.	<i>Scarsdale, N. Y.</i>	130 Wall st.
Frederick Max Adler	<i>New Haven, Conn.</i>	127 Greene st.
John Alling, Jr.	<i>Chicago, Ill.</i>	132 Wall st.
Harris Walton Baker	<i>Springfield, Mass.</i>	90 Wall st.
Arthur George Beach	<i>Bristol, Conn.</i>	133 College st.
Willis James Black	<i>Bridgeport, Conn.</i>	146 College st.
Burton Dickinson Blair	<i>Collinsville, Conn.</i>	161 York st.
Arthur Eli Booth	<i>Peace Dale, R. I.</i>	136 Grove st.
William Henry Bronson	<i>New York City</i>	109 High st.
Joseph Douglas Brown	<i>New York City</i>	156 Grove st.
Wendell Greene Brownson	<i>New Canaan, Conn.</i>	133 College st.
Sterling Haight Bunnell	<i>Stratford, Conn.</i>	146 College st.
Browne Caldwell	<i>Pittsburgh, Pa.</i>	90 Wall st.

Robert Calhoun	<i>Chicago, Ill.</i>	131 Grove st.
DeLancey Allen Cameron	<i>Caledonia, N. Y.</i>	505 Chapel st.
Robert Hanna Carnahan	<i>Fort Wayne, Ind.</i>	88 Wall st.
Henry Albert Carpenter	<i>Willimantic, Conn.</i>	103 Park st.
Francis Allen Clark	<i>Plantsville, Conn.</i>	70 Howe st.
Noyes Dwight Clark	<i>Woodbridge, Conn.</i>	642 Elm st.
Robert Lewis Coleman	<i>San Francisco, Cal.</i>	131 Grove st.
Lehman Adams Cooper	<i>Hagerstown, Md.</i>	131 Grove st.
Homer Stille Cummings	<i>New Haven, Conn.</i>	376 Whitney av.
Laurence Andrew Dodsworth	<i>New York City</i>	425 Temple st.
Frederick James Easterbrook	<i>New Haven, Conn.</i>	82 York sq.
George Sherwood Eddy	<i>Leavenworth, Kan.</i>	133 College st.
Wyatt Collier Estes	<i>Memphis, Tenn.</i>	285 York st.
George Chandler Forrest	<i>Hartford, Conn.</i>	133 College st.
Albert Francke	<i>New York City</i>	43 College st.
Eugene Duncan Funk	<i>Shirley, Ill.</i>	1002 Chapel st.
Frank Hamilton Funk	<i>Bloomington, Ill.</i>	1002 Chapel st.
Edward Everett Gates	<i>Indianapolis, Ind.</i>	88 Wall st.
Simon Phillip Goodhart	<i>New Haven, Conn.</i>	159 Orange st.
Willis Blake Goodwin	<i>Bangor, Me.</i>	128 Wall st.
Henry Whitmore Gregory	<i>Darien, Conn.</i>	144 Olive st.
Lewis Winters Gunckel	<i>Dayton, O.</i>	36 Elm st.
William Pierson Hamilton	<i>New York City</i>	43 College st.
David Alexander Hays	<i>Johnstown, N. Y.</i>	248 York st.
Walter William Heffelfinger	<i>Minneapolis, Minn.</i>	131 Grove st.
Edwin Guy Helm	<i>Peru, Ind.</i>	310 Elm st.
John Williamson Herron, Jr.	<i>Cincinnati, O.</i>	107 Wall st.
James Tracy Hill	<i>Chicago, Ill.</i>	43 College st.
Robert Gibson Hilton	<i>Newburgh, N. Y.</i>	248 York st.
Robert Massonneau Hoffman	<i>Red Hook, N. Y.</i>	248 York st.
Thomas Osborn Horton	<i>Peconic, N. Y.</i>	132 Wall st.
Robert Schuttler Hotz	<i>Chicago, Ill.</i>	248 York st.
David Lynde Huntington	<i>San Diego, Cal.</i>	248 York st.
Milton Cleaveland Isbell	<i>Ansonia, Conn.</i>	Ansonia
Theodore Caldwell Janeway	<i>New York City</i>	42 Elm st.
Frederick William Jones, Jr.	<i>New York City</i>	126 Wall st.
George Coburn Kohler	<i>Akron, O.</i>	248 York st.
Augustus Frederick Kountze	<i>Omaha, Nebr.</i>	90 Wall st.
George Tallman Ladd	<i>New Haven, Conn.</i>	204 Prospect st.
George Marcellus Landers, Jr.	<i>New Britain, Conn.</i>	43 College st.
Walter William Law, Jr.	<i>Yonkers, N. Y.</i>	36 Elm st.
Clifford Walter Leavenworth	<i>Wallingford, Conn.</i>	35 High st.
Daniel Alden Loring, Jr.	<i>Detroit, Mich.</i>	43 College st.
Charles Nassau Lowrie	<i>Warrior's Mark, Pa.</i>	104 Wall st.
George Eldredge McClellan	<i>Woodstock, Conn.</i>	59 Grove st.

Harold Chauncey Mathews	New York City	132 Wall st.
David Magie Meeker	Newark, N. J.	1142 Chapel st.
George Wylie Mercer	Omaha, Nebr.	133 College st.
Harral Mulliken	Washington, D. C.	101 W.
Gustave Munzesheimer	New York City	1090 Chapel st.
John Stevens Murdock	Westbrook, Conn.	90 Wall st.
Warren Bynner Nash	Brooklyn, N. Y.	134 College st.
John Colwell Neale	Kittanning, Pa.	337 Orange st.
Nathaniel Read Norton	Brooklyn, N. Y.	65 Grove st.
Gustave Osterweis	New Haven, Conn.	301 Crown st.
Stanley Hawken Pearce	Denver, Col.	130 Wall st.
Arthur Chapin Pease	Ellington, Conn.	60 Lyon st.
William Horace Pelton	Hartford, Conn.	88 Wall st.
George Henry Pinney	South Manchester, Conn.	248 York st.
George Nathaniel Prentiss	Watertown, Wisc.	126 Wall st.
Alfred Helm Preston	Omaha, Nebr.	88 Wall st.
Walter Grey Preston	Omaha, Nebr.	88 Wall st.
Harold Anthony Richmond	Providence, R. I.	42 Elm st.
Stoughton Fletcher Ritzinger	Indianapolis, Ind.	138 College st.
Milton Holley Robbins	Lakeville, Conn.	67 Howe st.
Charles Marcy Robinson	Middletown, Conn.	36 Elm st.
Eugene Boutelle Sanger	Bangor, Me.	36 Elm st.
Charles H. Saunders	Hartford, Conn.	137 College st.
Ennis Newton Searles	New Haven, Conn.	279 Sherman av.
John David Shattuck	Norwich, N. Y.	65 Grove st.
Harry Hudson Shepard	New Haven, Conn.	409 Orange st.
George Monroe Sidenberg	New York City	1076 Chapel st.
Edward Carlton Sisson	Binghamton, N. Y.	552 Chapel st.
George Milton Smith	Plantsville, Conn.	70 Howe st.
Thomas Cullen Bryant Snell	New Haven, Conn.	105 Wooster st.
Lewis Edwards Sparrow	Colchester, Conn.	92 York sq.
George Pratt Starkweather	New Haven, Conn.	N. H. Hospital
George Fetter Stickney	Louisville, Ky.	248 York st.
Charles Ferris Sturtevant	Cleveland, O.	225 Grove st.
Edward Owen Sutton	Springfield, Mass.	83 Grove st.
Issa Tanimura	Tôkyô, Japan	39 Lynwood st.
Amasa Trowbridge	New Haven, Conn.	685 Orange st.
Edward VanIngen	Brooklyn, N. Y.	131 Grove st.
Clark Greenwood Voorhees	New York City	133 College st.
Arvine Wales	Massillon, O.	131 Grove st.
William Ernest Walker	Chicago, Ill.	131 Grove st.
Edward Young Ware	St. Louis, Mo.	9 Library st.
William Walker Weare	Chicago, Ill.	145 Goffe st.
Robert Karl Wehner, Jr.	New Haven, Conn.	1210 Chapel st.
Carl Frances Westerfeld	San Francisco, Cal.	9 Library st.

Rudolph Michael Weyerhaeuser	Rock Island, Ill.	88 Wall st.
Noah Ashley Whitney	Toledo, O.	36 Wall st.
Henry Wick, Jr.	Cleveland, O.	42 Elm st.
Aras James Williams	Utica, N. Y.	42 Elm st.
Charles Morgan Wood	Dayton, O.	133 Grove st.
George Waters Wood	Pittsburgh, Pa.	425 Temple st.
George Cushing Worthington	Cleveland, O.	36 Elm st.
Pierre Jay Wurts	New Haven, Conn.	113 Whitney av.
JUNIORS, 111		

FRESHMAN CLASS

Francis Mulliken Adams	New Haven, Conn.	459 Prospect st.
Wallace McKinney Alexander	Oakland, Cal.	250 York st.
Harris Platt Allen	New York City	679 Chapel st.
Herbert Burr Atha	Newark, N. J.	1142 Chapel st.
Fred Murray Ayres	Indianapolis, Ind.	136 College st.
Walter Stanton Bailey	Brooklyn, N. Y.	37 Elm st.
Arthur Kirke Baldwin	Cleveland, O.	1010 Chapel st.
William Atwater Baldwin	Lahaina, Maui, H. I.	250 York st.
Francis Edward Barbour	Montreal, Canada	120 High st.
Frank Harrison Barbour	Detroit, Mich.	130 Wall st.
Alfred Victor Barnes	Brooklyn, N. Y.	43 College st.
Joseph Bulkley Barnes	New York City	389 Temple st.
Joseph Wilbor Beach	Cheshire, Conn.	146 College st.
William Nicholas Beach	Orange, N. J.	393 Temple st.
Ben Roberts Bechtel	West Chester, Pa.	126 High st.
Charles Edmund Beeson	Uniontown, Pa.	126 Wall st.
Bartram Borden Boltwood	Castleton, N. Y.	137 Wall st.
Sherman Hoyt Bouton	Chicago, Ill.	92 York sq.
Waldo Clayton Briggs	New Haven, Conn.	636 State st.
Harry Kilburn Brown	Denver, Col.	131 Grove st.
Otis Gridley Bunnell	Burlington, Conn.	58 Lyon st.
Lucius Lucine Button	Norwich, Conn.	312 Elm st.
Walter Lord Caldwell	Ongar, Essex, England	393 Temple st.
George Flavivs Campbell	Pittsfield, Mass.	49 Dixwell av.
Frank Carew	New Haven, Conn.	59 Wall st.
George Carew	New Haven, Conn.	59 Wall st.
Willard Rowe Carrol	Yalesville, Conn.	Yalesville
Charles Butler Chandler	Hartford, Conn.	55 Trumbull st.
John Davenport Cheney	S. Manchester, Conn.	133 College st.
John Charles Clark	Cincinnati, O.	397 Temple st.
Walter Ellsworth Coe	Meriden, Conn.	397 Temple st.

Wesley Roswell Coe	<i>Middlefield, Conn.</i>	West Haven
Harry Cone Collins	<i>Springfield, Mass.</i>	1076 Chapel st.
William Garrard Comly	<i>Indianapolis, Ind.</i>	114 High st.
Egbert Wheeler Cornwall	<i>Patterson, N. Y.</i>	8 Trumbull st.
George Elder Crump	<i>Montclair, N. J.</i>	107 Wall st.
Wilbur Fisk Day, Jr.	<i>New Haven, Conn.</i>	310 York st.
Thomas Denny, Jr.	<i>New York City</i>	395 Temple st.
James Dudley Dewell, Jr.	<i>New Haven, Conn.</i>	400 Orange st.
Duncan Stuart Ellsworth	<i>Penn Yan, N. Y.</i>	126 Wall st.
Harold Robert Every	<i>Athens, N. Y.</i>	393 Temple st.
Fred Flood Follis	<i>San Francisco, Cal.</i>	413 Orange st.
Samuel Fray	<i>Bridgeport, Conn.</i>	371 Crown st.
Claude Gignoux	<i>Monroe, N. Y.</i>	223 York st.
George Arthur Gordon	<i>Savannah, Ga.</i>	38 Elm st.
J. Avery Gould	<i>Aurora, N. Y.</i>	62 W.
Andrew Barbey Graves	<i>Brooklyn, N. Y.</i>	46 Elm st.
Joseph Sutton Green	<i>Raynham, Mass.</i>	405 Temple st.
Harry Priest Greene	<i>Amsterdam, N. Y.</i>	107 Wall st.
Thomas Strong Griffing	<i>Setauket, N. Y.</i>	393 Temple st.
David Cullen Griggs	<i>Waterbury, Conn.</i>	231 York st.
Herbert William Hamlin	<i>Chicago, Ill.</i>	391 Temple st.
John Henry Hammond, Jr.	<i>St. Paul, Minn.</i>	389 Temple st.
Ogden Haggerty Hammond	<i>St. Paul, Minn.</i>	389 Temple st.
Josiah Harmar	<i>Philadelphia, Pa.</i>	1090 Chapel st.
Norman Dwight Harris	<i>Chicago, Ill.</i>	679 Chapel st.
Samuel Atkinson Harsh	<i>Denver, Col.</i>	1157 Chapel st.
Frank Lockwood Hatch	<i>Springfield, Ill.</i>	56 Whalley av.
Thomas Simmons Homans	<i>Springfield, Mass.</i>	1076 Chapel st.
Henry Dwight Hunt	<i>Columbia, Conn.</i>	81 Wall st.
Harry Helmer Jackson	<i>Chicago, Ill.</i>	106 Wall st.
Huson Taylor Jackson	<i>Allegheny City, Pa.</i>	103 Wall st.
Edward Wilson Johnstone	<i>Connellsville, Pa.</i>	126 Wall st.
Jairus William Kennan	<i>New Haven, Conn.</i>	409 Orange st.
James Moffatt Knapp	<i>Auburn, N. Y.</i>	231 York st.
Charles Thomas Kountze	<i>Omaha, Nebr.</i>	90 Wall st.
Henry Edgar Lane	<i>Killingworth, Conn.</i>	81 Wall st.
Isaac Chauncey McKeever	<i>New York City</i>	395 Temple st.
Edward McVickar	<i>Collinsville, N. Y.</i>	101 W.
James Stephen Maher	<i>New Haven, Conn.</i>	203 East st.
Denis James Maloney	<i>New Haven, Conn.</i>	34 Ferry st.
Frank Edwin Mandel	<i>Chicago, Ill.</i>	120 High st.
Richard Fisher Manning	<i>Brooklyn, N. Y.</i>	407 Orange st.
William Chamberlaine Marrow	<i>Baltimore, Md.</i>	1090 Chapel st.
Robert Valentine Massey	<i>Dover, Del.</i>	13 Home pl.
Gardner Meeker	<i>Newark, N. J.</i>	1142 Chapel st.

Austin Aaron Mendenhall	<i>Duluth, Minn.</i>	57 Prospect st.
Charles Wilson Merrels	<i>New Haven, Conn.</i>	24 Pearl st.
Reuben Miller, Jr.	<i>Pittsburgh, Pa.</i>	82 Wall st.
Edward Anthony Mitchell	<i>New York City</i>	46 Elm st.
Fred Mold	<i>Blossburg, Pa.</i>	138 St. John st.
Theophilus Nelson	<i>Bridgeport, Conn.</i>	371 Crown st.
Edward Sherman Nettleton	<i>New Haven, Conn.</i>	642 Elm st.
George Eli Nettleton	<i>New Haven, Conn.</i>	333 Exchange st.
Charles Henry Nichols	<i>Branford, Conn.</i>	Branford
Louis Septimus Owsley	<i>Chicago, Ill.</i>	391 Temple st.
Richard Francis Pearce	<i>Denver, Col.</i>	46 Elm st.
Montague Elias Perkins	<i>Bristol, Conn.</i>	742 State st.
Roger Swope Pitkin	<i>Chicago, Ill.</i>	55 Trumbull st.
Miles Albion Pond	<i>Torrington, Conn.</i>	57 Grove st.
Edward Harrison Post	<i>Wilkes-Barre, Pa.</i>	64 High st.
John Keeler Punderford	<i>New Haven, Conn.</i>	74 Howe st.
Harry Ralston Quinn	<i>Milton, Vt.</i>	101 Greene st.
Charles Cornwell Ramsdell	<i>New Haven, Conn.</i>	104 Wall st.
George Wolf Reilly, Jr.	<i>Harrisburg, Pa.</i>	347 York st.
William Reynolds Ricketts	<i>Wilkes-Barre, Pa.</i>	38 Lynwood st.
Albert B. Rogowski	<i>New Haven, Conn.</i>	318 Crown st.
Frank Herbert Sampson	<i>Boston, Mass.</i>	1079 Chapel st.
William Parker Sargent	<i>Chicago, Ill.</i>	137 Wall st.
Albert Leslie Sessions	<i>Bristol, Conn.</i>	109 Wall st.
Fredrick Crippen Sheldon	<i>Chicago, Ill.</i>	254 Crown st.
Edward Helfenstein Simmons	<i>St. Louis, Mo.</i>	133 College st.
Arthur Slade	<i>New York City</i>	60 Trumbull st.
Sherlon Duell Smith	<i>New Haven, Conn.</i>	101 Greene st.
Ralph William Sprague	<i>Chicago, Ill.</i>	391 Temple st.
Alix Welch Stanley	<i>New Britain, Conn.</i>	1010 Chapel st.
Edwin Sturtevant Steese	<i>Brookline, Mass.</i>	389 Temple st.
Paul Sterling	<i>Bridgeport, Conn.</i>	152 Grove st.
Raymond French Stoddard	<i>Milford, Conn.</i>	103 Park st.
Harry Taylor Stoddart	<i>Wilkes-Barre, Pa.</i>	38 Lynwood st.
James Graham Stokes	<i>New York City</i>	36 Wall st.
Edward Coleman Talcott	<i>Hartford, Conn.</i>	133 College st.
Worthington Smith Telford	<i>St. Albans, Vt.</i>	389 Temple st.
Isaac Biddle Thomas	<i>West Chester, Pa.</i>	126 High st.
Stephen S. Thorn	<i>New York City</i>	215 York st.
Charles Stewart Towle	<i>New York City</i>	425 Temple st.
John Henry Vought	<i>Buffalo, N. Y.</i>	133 College st.
Percy Talbot Walden	<i>Brooklyn, N. Y.</i>	137 College st.
Walter Frederick Waring	<i>Savannah, Ga.</i>	393 Temple st.
Lauren Kellogg Warnick	<i>Amsterdam, N. Y.</i>	107 Wall st.
Isaac Weil	<i>San Francisco, Cal.</i>	1076 Chapel st.

Charles Weiser	<i>York, Pa.</i>	395 Temple st.
Alfred Pelton Wheeler	<i>Meriden, Conn.</i>	Meriden
Edward Lancaster Whittemore	<i>Fort Union, N. M.</i>	213 Wooster st.
Phillip Keeney Williams	<i>Hartford, Conn.</i>	55 Trumbull st.
John Baker Windstandley	<i>Bedford, Ind.</i>	7 Library st.
Harry Philip Womelsdorf	<i>Pottsville, Pa.</i>	289 York st.
Walter Abbott Wood, Jr.	<i>Hoosac Falls, N. Y.</i>	60 Trumbull st.
William Bassett Woodward	<i>Denver, Col.</i>	62 w.
Edward Vanuxem Wurts	<i>Bridgeton, N. J.</i>	113 Whitney av.
Vincent Jay Youmans	<i>Mount Vernon, N. Y.</i>	405 Temple st.
Clarence Clark Zantzing	<i>Philadelphia, Pa.</i>	38 Elm st.

FRESHMEN, 132

SPECIAL STUDENTS NOT CANDIDATES FOR A DEGREE

Frederic Carter	<i>Waterbury, Conn.</i>	36 Elm st.
Freeland Barney Gardner	<i>Chicago, Ill.</i>	132 Wall st.
Alfred Stillé Ives	<i>New Haven, Conn.</i>	347 Temple st.
William Whittemore Low	<i>New Haven, Conn.</i>	213 Wooster st.
Joseph Lesinsky	<i>New York City</i>	407 Temple st.
Arthur Stein	<i>Chicago, Ill.</i>	120 High st.
Courtland Henry Trowbridge	<i>New Haven, Conn.</i>	360 Temple st.

SPECIAL STUDENTS, 7

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SCHOOL OF THE FINE ARTS

Genevieve Allis	<i>Birmingham, Conn.</i>
Bertha P. Attwood	<i>East Haddam, Conn.</i>
M. Ona Banks	<i>New Haven, Conn.</i>
Constance H. Blake	<i>New Haven, Conn.</i>
Elizabeth K. Bradley	<i>New Haven, Conn.</i>
Grace Brnson	<i>New Haven, Conn.</i>
Susan J. Candee	<i>New Haven, Conn.</i>
Mary F. Carew	<i>New Haven, Conn.</i>
Elizabeth C. Cooper	<i>New Haven, Conn.</i>
Grace Daggett	<i>New Haven, Conn.</i>
John I. H. Downes	<i>New Haven, Conn.</i>
Caroline R. Durgy	<i>New Haven, Conn.</i>
Helen R. Dwight	<i>New Haven, Conn.</i>
Mary W. Evans	<i>New Haven, Conn.</i>
Elizabeth T. Fitch	<i>New Haven, Conn.</i>
Robert K. Gaston	<i>Dallas, Tex.</i>
Christian G. Gunther	<i>Stratford, Conn.</i>
Noble F. Hoggson	<i>New Haven, Conn.</i>
Nellie B. Holcomb	<i>New Haven, Conn.</i>
Irving E. Hurlbut	<i>New Haven, Conn.</i>
Mary Lamport	<i>New Haven, Conn.</i>
George H. Langzettell	<i>New Haven, Conn.</i>
Christophia Leffingwell	<i>New Haven, Conn.</i>
Josephine M. Lewis	<i>New Haven, Conn.</i>
Minnie L. Miles	<i>Stratford, Conn.</i>
Mary A. Miller	<i>New Haven, Conn.</i>
Eleanor D. Munger	<i>New Haven, Conn.</i>
Stella M. Poronto	<i>Fair Haven, Conn.</i>
Edith A. Rockwell	<i>New Haven, Conn.</i>
Elnora D. Rogers	<i>New Haven, Conn.</i>
Frank K. Rogers	<i>Providence, R. I.</i>

Harriet E. Smith	<i>Ansonia, Conn.</i>
S. Kate Spencer	<i>Westerville, O.</i>
Mary E. Sperry	<i>New Haven, Conn.</i>
Maria E. Street	<i>Milford, Conn.</i>
G. Albert Thompson	<i>Fair Haven, Conn.</i>
Mary Thompson	<i>Poughkeepsie, N. Y.</i>
Willard Gibbs Van Name	<i>New Haven, Conn.</i>
Lila M. Wells	<i>New Haven, Conn.</i>
Mary B. Wells	<i>Wethersfield, Conn.</i>
Noah A. Whitney	<i>Toledo, O.</i>
Fannie L. Wiseman	<i>New Haven, Conn.</i>

Art Students,	42
Special Undergraduate Students in Drawing, .	132
	<hr/>
Total number of students receiving instruction, .	174

DEPARTMENT OF THEOLOGY

(YALE DIVINITY SCHOOL)

RESIDENT LICENTIATES,

ATTENDING LECTURES

Eli George Biddle	<i>New Haven, Conn.</i> 13 Admiral st.
William Fisher Markwick,	<i>New Haven, Conn.</i> 149 St. John st.
Richmond (Eng.) Wesleyan College }	

RESIDENT LICENTIATES, 2

GRADUATE CLASS,

PURSUING FOURTH YEAR STUDIES

Olaus Dahl, B.A.	}	<i>Lochiel, Wisc.</i> 1010 Chapel st.
Luther College, 1885, B.D. Yale University, 1889		
Henry Davies, B.D.	}	<i>London, England</i> 53 E.
Yale University, 1888		
William Griffiths, B.D.	}	<i>Cwmilynnfell, South Wales</i> 17 E.
Yale University, 1889, Carmarthen College, 1886		
Albert Wellman Hitchcock, B.D.	}	<i>Kalamazoo, Mich.</i> 108 W.
Yale University, 1889, B.A. Amherst College, 1882 (<i>On the Hooker Fellowship</i>)		
Robert Murray Hogue, B.D.	}	<i>Philadelphia, Pa.</i> 93 W.
Yale University, 1889, B.A. University of Pennsylvania, 1886		
Luther Kendall Long, B.D.	}	<i>New Haven, Conn.</i> 49 Ivy st.
Yale University, 1889, Ph.B. Adrian College, 1883		
Lucius Harrison Thayer, B.A.	}	<i>Westfield, Mass.</i> 111 W.
Amherst College, 1882, B.D. Yale University, 1888		

GRADUATE CLASS, 7

SENIOR CLASS

Edward Benjamin Bagby, B.A. } Kentucky University, 1887	<i>Tappahannock, Va.</i>	55 W.
Lucius Olmsted Baird, B.A. } Yale University, 1885	<i>Chicago, Ill.</i>	109 W.
Frank Clyde Baker, B.A. } Oberlin College, 1886	<i>Bay City, Mich.</i>	87 W.
Gerald Hamilton Beard, B.A. } Yale University, 1887	<i>Chicago, Ill.</i>	29 E.
Edwin Victor Bigelow, B.A. } University of Washington, 1887	<i>Seattle, Wash.</i>	99 W.
Jesse Levi Bright, } Oberlin College	<i>Columbus, O.</i>	114 W.
Daniel Emery Burtner, B.A. } Lebanon Valley College, 1886	<i>West Fairview, Pa.</i>	34 E.
Robert Coit Chapin, B.A. } Beloit College, 1885	<i>Beloit, Wisc.</i>	110 W.
Edward Mortimer Chapman, B.A. } Yale University, 1884	<i>Old Saybrook, Conn.</i>	89 W.
Charles Dow Crawford, B.A. } Drury College, 1887	<i>Springfield, Mo.</i>	23 E.
Arthur Hill Daniels, B.A. } Olivet College, 1887	<i>Millis, Mass.</i>	97 W.
William Davies, } Haverfordwest Bapt. College	<i>Sarn, Wales</i>	32 E.
Josiah Pope Dickerman, B.A. } Amherst College, 1886	<i>Foxborough, Mass.</i>	83 W.
Hugh Latimer Elderdice, B.A. } Western Maryland College, 1882	<i>Baltimore, Md.</i>	2 E.
Edward Torrey Ford, } Amherst College	<i>Brockton, Mass.</i>	27 E.
Henry French Goodwin, B.A. } Olivet College, 1884	<i>Chicago, Ill.</i>	52 E.
Lincoln Archer Holp, } Otterbein University	<i>Columbus, O.</i>	47 E.
Edward Payson Holton, B.A. } Amherst College, 1887	<i>Everett, Mass.</i>	31 E.
George Ellsworth Hooker, B.A. } Amherst College, 1883	<i>Barre, Vt.</i>	88 W.
Herbert Bacon Hutchins, B.A. } Harvard University, 1886	<i>Brooklyn, N. Y.</i>	105 W.
George Henry Jackson, } Hamilton Theol. Sem., 1887	<i>New Haven, Conn.,</i> 75 Winthrop av.	
Frederic William Macallum, B.A. } McGill University, 1888	<i>Maxville, Ont., Canada</i>	37 E.
Julius Adolph Meckel, } Oberlin College	<i>Cleveland, O.</i>	104 W.

James Wilber Moulton, B.A. } Bates College, 1887	Guilford, Conn.	78 w.
John Thomas Nichols, B.A. } Harvard University, 1884	Freetown, Mass.	13 E.
Stephen Beasley Linnard Penrose, B.A. } Williams College, 1885	Germantown, Pa.	113 w.
Perry Oliver Powell, B.A. } Kentucky University, 1887	Monmouth, Oregon	55 w.
John Harrison Reid, } Lafayette College	West Hebron, N. Y.	114 Olive st.
Edward Tallmadge Root, B.A. } Yale University, 1887	Springfield, O.	41 E.
Theophilus Huntington Root, B.A. } Harvard University, 1885	Framingham, Mass.	41 E.
Claudius Milton Severance, B.A. } Middlebury College, 1883	Bennington Center, Vt.	103 w.
Harry Dodd Sheldon, B.A. } Oberlin College, 1886	Hillsdale, Mich.	436 Orange st.
Elmer Ellsworth Smiley, B.A. } Syracuse University, 1885	North Syracuse, N. Y.	81 w.
Edward Lincoln Smith, B.A. } Yale University, 1886	Montpelier, Vt.	102 w.
Joseph Jansen Spencer, B.A. } Otterbein University, 1884	Westerville, O.	73 w.
Elmer Jay Teagarden, B.A. } Ohio Normal University, 1885	Salem, O.	43 Garden st.
William Austin Trow, B.A. } Amherst College, 1886	Northampton, Mass.	19 E.
Edwin Alonzo Warfield, B.A. } Western Maryland College 1882, S.D. Westminster Theol. Seminary	Urbana, Md.	59 w.
Eugene Carroll Webster, B.A. } Harvard University, 1887	Malden, Mass.	18 E.
Morrison Weimer, B.A. } Lebanon Valley College, 1887	Donegal, Pa.	25 E.
Schuyler Sampson White, B.A. } Harvard University, 1884	Bridgewater, Mass.	21 E.
John Sheridan Zelle, B.A. } Williams College, 1887	Bangor, Me.	79 w.

SENIOR CLASS, 42

MIDDLE CLASS

Joseph Marion Adams, B.A. } DePauw University, 1886	Paris, Ill.	118 w.
George Page Anderson, B.A. } Whitman College, 1886	Walla Walla, Wash.	98 w.

Claus Alfrid Bergström, B.A. } Brown University, 1888	<i>East Greenwich, R. I.</i>	70 W.
Edward Ernest Bradley, B.A. } Williams College, 1885	<i>Stockbridge, Mass.</i>	14 E.
George Atwood Brock, B.A. } Harvard University, 1888	<i>Boston, Mass.</i>	24 E.
Albert Shepard Bromer, B.S. } Ursinus College, 1888	<i>Schwenksville, Pa.</i>	36 E.
Harvey Safford Bush, B.A. } University of Michigan, 1888	<i>Port Huron, Mich.</i>	12 E.
Chester Merrit Clark, B.A. } Knox College, 1886	<i>Galesburg, Ill.</i>	107 W.
James Romeyn Danforth, Jr., B.A. } Amherst College, 1888	<i>Philadelphia, Pa.</i>	33 E.
Arthur Ernest Davies, } Lancashire College	<i>London, England</i>	53 E.
Elmer Addison Dent, PH.B. } University of Ohio, 1888	<i>Athens, O.</i>	54 E.
Calvin Ursinus Olevianus Derr, B.A. } Ursinus College, 1888	<i>Reading, Pa.</i>	36 E.
Charles Hatfield Dickerson, B.A. } Oberlin College, 1889	<i>Sumter, S. C.</i>	56 W.
Edward Colton Fellowes, B.A. } Yale University, 1888	<i>Hartford, Conn.</i>	95 W.
Mosheim Ross Walter Fishburn, B.A. } Pennsylvania College, 1887	<i>Millersburg, Pa.</i>	22 E.
Thomas Arthur Frey, B.A. } Roanoke College, 1888	<i>Lovettsville, Va.</i>	49 E.
Edward Augustus George, M.A. } Yale University, 1888	<i>Providence, R. I.</i>	8 E.
Harvey Bartlett Greene, } Colorado College	<i>Lowell, Mass.</i>	50 E.
Tasuku Harada, } Doshisha College	<i>Kobe, Japan</i>	67 W.
Dorr Albert Hudson, B.A. } Yale University, 1888	<i>Wakefield, Mass.</i>	46 E.
George Merriam Hyde, B.A. } Amherst College, 1888	<i>Chicago, Ill.</i>	15 E.
David Lyman Kebbe, B.A. } Amherst College, 1888	<i>Holliston, Mass.</i>	39 E.
Allen Alonzo Keene, B.A. } Amherst College, 1887	<i>Atkinson, Me.</i>	123 W.
William Albert Korn, B.A. } Ursinus College, 1887	<i>Mertstown, Pa.</i>	28 E.
Arthur Mitchell Little, B.A. } Yale University, 1889	<i>Washington, D. C.</i>	46 E.
John Mortimer Lydgate, B.A. } University of Toronto, 1880	<i>Laupahoehoe, Hawaii</i>	112 W.

Edward Lester Marsh, B.A. } Amherst College, 1888	Leicester, Mass.	40 E.
Frederick Howard Means, B.A. } Harvard University, 1888	Dorchester, Mass.	26 E.
Frederick Warren Oakes, B.A. } Bates College, 1888	Lawrence, Mass.	20 E.
Harry Ernest Peabody, B.A. } Harvard University, 1887	Princeton, Me.	26 E.
Frederic William Phelps, M.A. } Amherst College, 1888	Topeka, Kan.	91 W.
Edgar Allen Potts, B.A. } Randolph-Macon College, 1882	Lynchburg, Va.	121 W.
Frederick Bates Richards, M.A. } Amherst College, 1888	Enfield, Mass.	96 W.
George Samuel Richards, } Brecon Memorial College, 1880	Mahanoy City, Pa.	42 E.
Frederick Cowles Taylor, B.A. } Amherst College, 1884	Granby, Mass.	6 E.
Willard Brown Thorp, B.A. } Amherst College, 1887	Oxford, N. Y.	30 E.
Arthur Clarence Townsend, B.A. } Bates College, 1888	Lewiston, Me.	120 W.
Clyde Weber Votaw, B.A. } Amherst College, 1888	Geneva, O.	15 E.
George Carl Weiss, } Ripon College	DePere, Wisc.	51 E.
Samuel Weyler, B.A. } Knox College, 1888	Vitebsk, Russia	379 Orchard st.
Elbridge Cutler Whiting, B.A. } Amherst College, 1888	Holliston, Mass.	35 E.
Henry Knowles Wingate, B.S. } Carleton College, 1887	Minneapolis, Minn.	107 W.
Benson Newell Wyman, B.A. } Oberlin College, 1886	Newark, N. Y.	84 W.

MIDDLE CLASS, 43

JUNIOR CLASS

Arthur John Arn, B.A. } Yale University, 1887	Kansas City, Kan.	58 W.
Joseph Henry Artopé, B.D. } Wilberforce University, 1889	Augusta, Ga.	56 W.
Jesse Bailey, B.A. } Bates College, 1887	Auburn, Me.	117 W.
Clifford Webster Barnes, B.A. } Yale University, 1889	Pasadena, Cal.	80 W.
John Bigham, B.A. } Amherst College, 1887	Pittsburgh, Pa.	61 W.

Emery Lucius Bradford	<i>Boston, Mass.</i>	10 E.
Thomas Cutler DesBarres, B.A. } University of Toronto, 1889	<i>Toronto, Canada</i>	48 E.
Earnest Webster Dustan, B.A. } Harvard University, 1889	<i>Boston, Mass.</i>	76 w.
Julius Wilbur Eggleston, B.A. } Wesleyan University, 1889	<i>Waterbury, Conn.</i>	66 w.
Edward Fairbank, B.A. } Amherst College, 1889	<i>Hatfield, Mass.</i>	85 w.
Edward Huntington Fallows, B.A. } Amherst College, 1886	<i>Chicago, Ill.</i>	100 w.
Hiram Everett Farnham, B.A. } Colby University, 1889	<i>Belgrade, Me.</i>	45 E.
Frank Lewis Garfield, B.A. } Amherst College, 1888	<i>East Jaffrey, N. H.</i>	61 w.
Charles Otis Gill, B.A. } Yale University, 1889	<i>Orange, N. Y.</i>	77 w.
Charles Sumner Holton, B.A. } Amherst College, 1889	<i>Everett, Mass.</i>	31 E.
William Herbert Hutchinson, } Nottingham University	<i>Springdale, Conn.</i>	66 w.
Frank Lovejoy Johnston, B.A. } Wheaton College, 1889	<i>Byron, Ill.</i>	60 w.
Israel Jordan, B.A. } Bates College, 1887	<i>Casco, Me.</i>	119 w.
Kevork Harutune Kazanjian, } Marash Theological Seminary, 1880	<i>Aintab, Turkey</i>	74 w.
Edward Everett Keedy, B.A. } Lebanon Valley College, 1889	<i>Rohrersville, Md.</i>	115 w.
James Harvey Keeling, B.A. } Rutgers College, 1889	<i>Utica, N. Y.</i>	122 w.
William Gilbert Lathrop, B.A. } Brown University, 1889	<i>Providence, R. I.</i>	90 w.
Elmer Francis Letcher, B.A. } Yale University, 1889	<i>Southbridge, Mass.</i>	58 w.
Edward Olaus Loe, B.A. } Yale University, 1889	<i>Grand Meadow, Minn.</i>	94 w.
Claire Franklin Luther, B.A. } Amherst College, 1889	<i>Painesville, O.</i>	91 w.
Duncan Salisbury Merwin, B.A. } Yale University, 1888	<i>New Haven, Conn.</i> 387 Temple st.	
Harry Roberts Miles, B.A. } Harvard University, 1888	<i>Appleton, Wisc.</i>	76 w.
William Sacheus Morgan, } Baptist College, Pontypool	<i>Pontypool, England</i>	57 w.
Herbert Arthur Mosser, B.A. } Olivet College, 1889	<i>Olivet, Mich.</i>	106 w.
Roscoe Nelson, B.A. } Bates College, 1887	<i>Canaan, Me.</i>	119 w.

Richard Owen, B.A. }	<i>Pittsburgh, Pa.</i>	115 W.
Marietta College, 1889 }		
Charles Eugene Ozanne, B.A. }	<i>Cleveland, O.</i>	43 E.
Western Reserve University, 1889 }		
Francis Leseure Palmer, B.A. }	<i>Chicopee, Mass.</i>	119 College st.
Amherst College, 1885 }		
Morgan Everett Powelson, B.A. }	<i>Plainfield, O.</i>	60 W.
Lafayette College, 1889 }		
Benjamin Berry Seelye, B.A. }	<i>Middlebury, Conn.</i>	8 University pl.
Yale College, 1876 }		
Edward Parsons Seymour, B.A. }	<i>Washington, D. C.</i>	571 Elm st.
Amherst College, 1884 }		
Amos Alonzo Stagg, B.A. }	<i>Orange, N. Y.</i>	Dwight Hall
Yale University, 1888 }		
Allan Albert Tanner, B.A. }	<i>Jacksonville, Ill.</i>	44 E.
Illinois College, 1888 }		
Hubert Wetmore Wells, B.A. }	<i>Louisville, Ky.</i>	92 W.
Yale College, 1889 }		
Irving Francis Wood, M.A. }	<i>North Walton, N. Y.</i>	4 E.
Hamilton College, 1888 }		
Samuel Hetherington Woodrow, B.A. }	<i>Auburn, Me.</i>	23 Shelton av.
Bates College, 1888 }		
David Lewis Yale, B.A. }	<i>Meriden, Conn.</i>	38 E.
Williams College, 1889 }		

JUNIOR CLASS, 42

SUMMARY

RESIDENT LICENTIATES,	2
GRADUATE CLASS,	7
SENIOR CLASS,	42
MIDDLE CLASS,	43
JUNIOR CLASS,	42
TOTAL,	136

DEPARTMENT OF MEDICINE

(YALE MEDICAL SCHOOL)

GRADUATE STUDENTS

Charles Jenkins Foote, B.A. } Yale University 1883, M.D. Harvard University, 1887 }	<i>New Haven, Conn.</i> 305 Howard av.
William Ellison Lockwood, PH.B. } Yale University 1883, M.D. Yale University, 1885 }	<i>New Haven, Conn.</i> 32 Pearl st.

GRADUATE STUDENTS, 2

SENIOR CLASS

Edward Robinson Baldwin	<i>Cheshire, Conn.</i> 200 York st.
William Pitt Baldwin, B.A. } Yale University, 1888 }	<i>New Haven, Conn.</i> 32 Edgewood av.
John Steel Barnes	<i>Oxford, Conn.</i> 255 Crown st.
William John Burke	<i>New Haven, Ct. N.</i> Quinpiac st.
Benjamin Austin Cheney, B.A. } Yale University, 1888 }	<i>New Haven, Conn.</i> 45 Elm st.
Herbert Martin Clapp	<i>New Haven, Conn.</i> 24 Lincoln st.
Harry Burr Ferris, B.A. } Yale University, 1887 }	<i>Sound Beach, Conn.</i> 297 Crown st.
Daniel Albion Jones, B.A. } Yale University 1884, D.M.D. Harvard University, 1889 }	<i>New Haven, Conn.</i> 746 Chapel st.
George Washington Lawrence	<i>Pepperell, Mass.</i> N. H. Hospital
Charles Alling Tuttle, PH.B. } Yale University, 1888 }	<i>New Haven, Conn.</i> 364 Orchard st.

SENIOR CLASS, 10

MIDDLE CLASS

Frank Judson Bardwell	<i>Tunkhannock, Pa.</i> 106 York sq.
Harry Alfred Elcock	<i>New Haven, Conn.</i> 86 Henry st.
G. Skiff Ford	<i>New Haven, Conn.</i> 541 Howard av.
Henry Floyd Gamble, B.A. } Lincoln University, 1888 }	<i>Charlottesville, Va.</i> 12 Edgewood av.
Charles Winthrop Hartwell	<i>New Haven, Ct.</i> 12 University pl.
Samuel Wellington Irving	<i>Birmingham, Conn.</i> 404 Crown st.
Reuben Arthur Lockhart	<i>Bridgeport, Conn.</i> 107 York st.

James Henry McInerny
 Shiukichi Shigemmi, PH.B. }
 Yale University, 1888
 Clarence Edward Skinner
 Richard Ward Westbrook

Worcester, Mass. 107 York st.
 Imabari, Japan 111 York st.
 Westville, Conn. 24 College st.
 New Haven, Conn. 174 Olive st.

MIDDLE CLASS, II

JUNIOR CLASS

Frederick Ellis Bass
 George Newton Bell
 Edward Lydston Bliss, B.A. }
 Yale University, 1887
 Richard Francis Brown
 Frederick Oscar Chamberlain
 Rollin Blackman Chatfield
 Arthur Sanford Cheney, PH.B. }
 Yale University, 1889
 John Philip Cooney
 Elias Wyman Davis, B.A. }
 Yale University, 1880
 Timothy John Foley
 Austin Brainerd Fuller, B.A. }
 Yale University, 1866
 Frederick George Graves
 Thomas Francis Healy
 Moses Jacob Husinsky
 George Henry Jackson
 John Francis Kitson
 Emanuel Lyons
 Archibald McNeil
 Charlie Nelson Murray
 Charles O'Leary, Jr.
 Bismarck Robert Pinchback
 Richard Michael Raymond
 Eugene Stout Ripley
 Paul Skiff Robinson, PH.B. }
 Yale University, 1889
 Alexander Rovinsky
 Hyman Solomon Shlevin
 James Henry Spear
 Patrick Francis Strapp
 William Charles Wurtemberg, PH.B. }
 Yale University, 1889

Antigua, W. I. 34 Webster st.
 Windsor, Conn. 43 Whalley av.
 Newburyport, Mass. 371 Crown st.
 New Britain, Conn. 371 East st.
 Mount Morris, N. Y. 82 Wall st.
 Woodbridge, Conn. 415 George st.
 New Haven, Conn. 45 Elm st.
 Providence, R. I. 163 York st.
 Paxton, Mass. 415 George st.
 Worcester, Mass. 107 York st.
 New Haven, Conn. 145 Olive st.
 Danbury, Conn. 312 George st.
 Birmingham, Conn. Birmingham
 New Haven, Conn. 524 East st.
 New Haven, Ct. 75 Winthrop av.
 Hartford, Conn. 310 Elm st.
 New Haven, Conn. 100 St. John st.
 New Haven, Conn. 149 Bradley st.
 Madison, Conn. So. Quinnipiac st.
 Providence, R. I. 163 York st.
 New Orleans, La. 255 Crown st.
 Worcester, Mass. 107 York st.
 Asbury Park, N. J. 163 York st.
 New Haven, Conn. 1 Hillhouse av.
 New Haven, Conn. 21 Jefferson st.
 New Haven, Conn. 608 Grand av.
 Fair Haven, Conn. Howard av.
 Seymour, Conn. 404 Crown st.
 Willink, N. Y. 88 Crown st.

JUNIOR CLASS, 29

SPECIAL STUDENTS

Alejandro Garcia, A.	<i>Cartago, Costa Rica</i>	98 Day st.
Edward Payson Holton, B.A. }	<i>Everett, Mass.</i>	37 E.
Amherst College, 1887 }		
SPECIAL STUDENTS, 2		

SUMMARY

GRADUATE STUDENTS,	.	.	.	.	.	2
SENIOR CLASS,	.	.	.	.	.	10
MIDDLE CLASS,	.	.	.	.	.	11
JUNIOR CLASS,	.	.	.	.	.	29
SPECIAL STUDENTS	.	.	.	.	.	2
TOTAL,	.	.	.	.	.	54

DEPARTMENT OF LAW

(YALE LAW SCHOOL)

GRADUATE STUDENTS

Lawrence Louis Barnum, LL.B.	}	<i>Coxsackie, N. Y.</i> 55 Prospect st.
Yale University 1886, PH.B.		
Yale Univ., 1889, Attorney at Law		
George Emerson Beers, M.A.	}	<i>Southport, Conn.</i> 127 Howe st.
Trinity College 1889,		
LL.B. Yale Univ., 1889, Attorney at Law		
Saburo Koya, LL.B.	}	<i>Tokyo, Japan</i> 377 Crown st.
Imp. Univ. of Japan, 1889		
Daniel Andrews McWilliams, LL.B.	}	<i>New Haven, Conn.</i> 16 Hamilton st.
Yale University, 1889, Attorney at Law		
Albert McClellan Mathewson, LL.B.	}	<i>New Haven, Conn.</i> 657 Orange st.
Yale University, 1884, Attorney at Law		
Kojiro Matsugata, M.L.	}	<i>Tokyo, Japan</i> 363 Elm st.
Yale University, 1889, Attorney at Law		
John Lewis Morehouse, LL.B.	}	<i>Fairfield, Conn.</i> Fairfield
Yale University, 1889, Attorney at Law		
Erwin Llewellyn Thorpe, M.L.	}	<i>West Haven, Conn.</i> West Haven
Yale University, 1887, Attorney at Law		
Soichi Tsuchiya, M.L.	}	<i>Tokyo, Japan</i> 125 Dwight st.
Yale University, 1889		
George Dutton Watrous, M.L.	}	<i>New Haven, Conn.</i> 58 Wall st.
Yale University, 1884, Attorney at Law		

GRADUATE STUDENTS, 10

SENIOR CLASS

William Andrew Andrew	<i>Cheshire, Conn.</i>	<i>Cheshire</i>
Frank Baker	<i>New Haven, Conn.</i>	86 Nicoll st.
John Bennetto, M.A. }	<i>New Haven, Conn.</i>	441 Orange st.
Yale University, 1889 }		
James Patrick Bree	<i>New Haven, Ct.</i>	430 Blatchley av.
George Walter Bristol	<i>Milford, Conn.</i>	Milford
Warren Henry Bristol	<i>New Haven, Conn.</i>	157 Meadow st.
Albert William Buddress, }	<i>Port Townsend, Wash.</i>	9 Sylvan av.
Attorney at Law }		
Edwin Frank Bugbee	<i>Willimantic, Conn.</i>	552 Chapel st.
Thomas Lamar Camp, B.L. }	<i>Dallas, Tex.</i>	121 York st.
Univ. of Texas 1889, Attorney at Law }		

John Alexander Campbell, PH.B. }	<i>Marion, Ill.</i>	227 Crown st.
Drake University, Attorney at Law }		
Willfred Adams Clark	<i>No. Stonington, Ct.</i>	552 Chapel st.
William Erwin Davis	<i>New Haven, Conn.</i>	80 Prince st.
Stephen Leland Dows, Jr.	<i>Cedar Rapids, Iowa</i>	227 Crown st.
Charles Gavin Duffy	<i>Circleville, O.</i>	310 Elm st.
Louis Bassial Eppstein, }	<i>Denison, Tex.</i>	6 Pearl st.
Attorney at Law }		
George Barber Fowler, B.A. }	<i>Thompsonville, Conn.</i>	120 York st.
Yale University, 1888 }		
Walter Francis Frear, B.A. }	<i>Honolulu, H. I.</i>	25 High st.
Yale University, 1885 }		
Andrew Miller Freas, }	<i>Berwick, Pa.</i>	421 Temple st.
Attorney at Law }		
Allan Arthur Gilbert	<i>Bridgeport, Conn.</i>	451 Howard av.
Frank Hewitt Hinckley	<i>Mystic Bridge, Conn.</i>	20 Orange st.
Wilhelm Peter Hofferbert	<i>Delphos, O.</i>	20 Orange st.
John Ireland Howard, }	<i>St. Paul, Minn.</i>	20 Whalley av.
Attorney at Law }		
Frank Wells Hubbard, B.A. }	<i>Litchfield, Conn.</i>	265 Orange st.
Yale University, 1888 }		
Orland Sidney Isbell, B.A. }	<i>New Haven, Conn.</i>	116 Howe st.
Yale University, 1888 }		
Louis Jacobs	<i>New Haven, Conn.</i>	12 Day st.
John Willard Keerans, }	<i>Statesville, N. C.</i>	35 High st.
Attorney at Law }		
Edward Everett Longan, LITT. M. }	<i>California, Mo.</i>	20 Orange st.
Missouri State Univ. 1889, }		
Attorney at Law }		
Robert Clark Morris	<i>Bridgeport, Conn.</i>	128 High st.
Keiichi Nosawa, }	<i>Tokyo, Japan</i>	131 Howe st.
Attorney at Law }		
William Joseph O'Sullivan, M.D. }	<i>New Haven, Conn.</i>	41 Elm st.
Yale University, 1889 }		
George Madison Pavey, B.A. }	<i>Washington C.H., O.</i>	84 Wall st.
Yale University, 1888 }		
Robert Seney Pelletreau	<i>W. Hampton Center, N. Y.</i>	64 w.
Lyman Ormond Perley, B.S. }	<i>Emporia, Kan.</i>	419 Temple st.
Northwestern University, 1887, }		
Attorney at Law }		
Philip Pond, 2d, B.A. }	<i>New Haven, Conn.</i>	220 Whalley av.
Yale University, 1888 }		
Henry Strunz, B.A. }	<i>Bristol, Conn.</i>	29 High st.
Yale University, 1888 }		
Edgar Montgomery Thacher	<i>Dayton, O.</i>	68 w.
Jeremiah Dean Toomey	<i>Fairfield, Conn.</i>	Fairfield
Francis Bacon Trowbridge, B.A. }	<i>New Haven, Conn.</i>	284 Crown st.
Yale University, 1887 }		

Winthrop Turney, B.A. }	Astoria, N. Y.	64 w.
Yale University, 1887		
Leonard Truman Waldron	Muskegon, Mich.	67 Whalley av.
Thomas Clifford Waterous	Hartford, Conn.	Hartford
Frank Lincoln Woodward, B.A. }	Denver, Col.	86 Wall st.
Yale University, 1888		
		SENIORS, 42

JUNIOR CLASS

George Washington Adams, Jr.	West Haven, Conn.	West Haven
George Woodburn Andrew	New Britain, Conn.	New Britain
Orren William Bates, B.A. }	Oneco, Conn.	107 Olive st.
Haverford College, 1884 }		
James Brown Bell	Glendale, O.	35 High st.
Charles Patrick Bohan	Pittston, Pa.	192 Grove st.
Joseph Patrick Brennan	Saratoga Springs, N. Y.	150 College st.
Walter Shaw Brewster, B.A. }	Brooklyn, N. Y.	311 York st.
Yale University, 1889 }		
Reuben Louis Cates	Maryville, Tenn.	35 High st.
Henry Graham Crocker	Sarnia, Ont., Canada	219 York st.
William Henry Davies	Los Angeles, Cal.	165 York st.
Fitz Daniel Ermentrout	Reading, Pa.	419 Temple st.
Hervey Richards Franklin, B.A. }	N. Attleboro, Mass.	196 York st.
Yale University, 1888 }		
Edward James Gavegan, B.A. }	New Haven, Conn.	59 Prospect st.
Yale University, 1889 }		
Frank Edwin Hawkes	Oxford, Me.	928 Chapel st.
Newell Watson Hayden	Denver, Col.	39 Lynwood st.
George Edwin Hill, B.A. }	Stamford, Conn.	29 Wall st.
Yale University, 1887 }		
John Aaron Hooper	York, Pa.	134 College st.
Samuel Stone Hotchkiss	Hartford, Conn.	1 Whalley av.
Benjamin Willard Jacobs, B.A. }	Denver, Col.	1161 Chapel st.
Yale University, 1889 }		
Paul Robinson Jarboe	San Francisco, Cal.	395 Temple st.
Percy Lincoln Johnson, PH.B. }	Bridgeport, Conn.	157 Church st.
Wesleyan University, 1889 }		
Sukahidi Kabayama	Tokyo, Japan	67 Whalley av.
George Aaron Kellogg, B.A. }	Vernon Center, Conn.	
Amherst College, 1889 }		107 Dixwell av.
Albert James Kenyon	Branford, Conn.	Branford
Robert Jacob Lewis	York, Pa.	134 College st.
Mayne Reid Longstreth, B.A. }	Collegeville, Pa.	53 Prospect st.
Ursinus College, 1889 }		
John Wesley Lutz	Lima, O.	483 Chapel st.

- Henry Hokixina Lyman
 Robert Hughes McCrary, B.A. }
 Central University of Ky., 1888 }
 Gregory McPherson, C.E. }
 Pa. Military Academy, 1889 }
 James Bernard Martin
 Richard White Miller, B.A. }
 Central University of Ky., 1888 }
 Robert Douglas Millholland
 Robert Chamberlain Mitchell
 Joseph Richard Morgan, PH.B. }
 Butler University, 1889 }
 Augustus Henry Mosle, B.A. }
 Yale University, 1889 }
 Frederick Eli Mygatt
 Burt Louis Newton
 Wallace Olmstead
 Frank Lee Owen, PH.B. }
 Yale University, 1889 }
 Israel Hyman Peres, B.A. }
 Yale University, 1889 }
 Frederic Barbour Perkins
 Charles Whittlesey Pickett
 Harrison Gray Platt, B.A. }
 Yale University, 1888 }
 William Hollis Pond
 William Archibald Ringrose
 Paul Russo
 Frederick Andrew Scott, B.A. }
 Yale University, 1889 }
 James Madison Self, B.A. }
 College of Montana, 1889 }
 Corwin Sheridan Shank
 Charles Hitchcock Sherrill, B.A. }
 Yale University, 1889 }
 Albert Brodie Stone, B.A. }
 University of Michigan, 1889 }
 Charles Edwin Thorn
 John Birney Tuttle
 Susumu Uchida
 Henry Mighels Verrill, PH.B. }
 Yale University, 1889 }
 Andrew Ludwig Winters, B.A. }
 Yale University, 1889 }
- Greenwood, S. Dak.* 468 State st.
Richmond, Ky. 421 Temple st.
Belle Mead, N. J. 391 Temple st.
New Haven, Conn. 576 Grand av.
Richmond, Ky. 421 Temple st.
Reading, Pa. 419 Temple st.
New Britain, Conn. 17 Home pl.
Irvington, Ind. 61 Admiral st.
New York City 86 Wall st.
New Milford, Ct. 139 College st.
Hartford, Conn. 421 Temple st.
Danbury, Conn. 192 Grove st.
San Francisco, Cal. 335 Orange st.
Memphis, Tenn. 125 Dwight st.
New Haven, Conn. 136 Howe st.
New Haven, Conn. 409 Temple st.
Milford, Conn. Milford
N. Attleboro, Mass. 196 York st.
Soissons, France 173 St. John st.
New Haven, Conn. 22 Factory st.
Terryville, Conn. 1161 Chapel st.
Butte City, Mont. 404 Crown st.
Canby, Oregon 219 York st.
Washington, D. C. 311 York st.
Fayetteville, Ark. 419 Temple st.
Washington, D. C. 219 York st.
New Haven, Conn. 300 Elm st.
Tokyo, Japan 23 Whalley av.
Portland, Me. 90 Wall st.
Reading, Pa. 131 Howe st.

SPECIAL STUDENTS

Henry Nathan Dikeman

Waterbury, Conn.

Waterbury

Thomas Lonergan, Jr.

Chicago, Ill.

391 Temple st.

SPECIAL STUDENTS, 2

SUMMARY

GRADUATE STUDENTS,	.	.	.	.	.	10
SENIOR CLASS, .	.	.	.	.	.	42
JUNIOR CLASS, .	.	.	.	.	.	57
SPECIAL STUDENTS,	.	.	.	.	.	2
TOTAL,	.	.	.	.	.	<hr/>111

SUMMARY OF STUDENTS

DEPARTMENT OF PHILOSOPHY AND THE ARTS:

GRADUATE COURSES	-	-	-	81	
YALE COLLEGE	-	-	-	736	
SHEFFIELD SCIENTIFIC SCHOOL	-			343	
ART SCHOOL	-	-	-	42	
				<hr style="width: 50px; display: inline-block; vertical-align: middle;"/>	1202
YALE DIVINITY SCHOOL	-	-	-	-	136
YALE MEDICAL SCHOOL	-	-	-	-	54
YALE LAW SCHOOL	-	-	-	-	111
					<hr style="width: 50px; display: inline-block; vertical-align: middle;"/>
					1503
Deduct for names inserted twice	-			26	
					<hr style="width: 50px; display: inline-block; vertical-align: middle;"/>
TOTAL	-	-	-	-	1477

DEGREES CONFERRED IN 1889

BACHELORS OF ARTS

Burr Reeve Abbe, Jr.	Samuel Herbert Fisher
William Pope Aiken	Claude Lamot Forbes
Joshua Wilson Allen	Leopold Joseph Francke
William Whitney Ames	Albert Myrick Freeman
William Lucius Armstrong	John Randolph Galt
Henry Cornelius Atkins	Edward James Gavegan
Arnold Plumer Austin	Charles Otis Gill
Freeman Donald Baerman	Porter Beach Godard
John Wallace Banks	John Cornelius Griggs
Clifford Webster Barnes	Thomas Hanlon, Jr.
Donald McLean Barstow	Edward Barrett Hinkleley
Horace Bennet Bartholomew	Howland Hoadley
John William Beckwith	Leverett Lord Hull
Ernest Smith Bishop	Rob't Watkinson Huntington, Jr.
Lester Bradner, Jr.	Arthur May Hyde
Walter Shaw Brewster	Baruch Israeli
Charles Twing Brooks	Benjamin Willard Jacobs
Philip Embury Browning	Arthur Edmands Jenks
Thomas Walter Buchanan	James Henry Keefe
Hillhouse Buel	Charles Foster Kent
Augustus Coburn	Charles Sherman King
George Coggill	George Lyman Lamphier
Albert St.Clair Cook	Chas. Chandler Griswold Lane
Howard Copland	Charles William Lefler
William Herbert Corbin	Milton Marshall Lemer
Safford Arnold Crummey	Elmer Francis Letcher
Thomas Mitchel Cullinan	Fred Nye Lindsay
John Havemeyer Daniels	Arthur Mitchell Little
Wm. Chester DeForest Dickinson	Edward Olaus Loe
Thomas Elliott Donnelley	Joseph Wilson Lucas
George Perkins Douglas	Robert Lee Luce
Eugene Henry Dupee	Joseph Sprigg McMahon
Frederick Wesley Ellis	William Adolphe McQuaid
Joseph Ralph Ensign	Henry Eager Mason
Joseph Grant Ewing	William Ross Matson

Mark Edward Merrifield	Frederick Andrew Scott
John Fuller Appleton Merrill	Edward Ewing Sears
William Clifford Moore	Thomas Gaskell Shearman
Augustus Henry Mosle	Charles Hitchcock Sherrill
Henry Ford Noyes	Charles Sanford Skilton
John Ball Osborne	Herbert Augustine Smith
William Herbert Page	Samuel Lewis Smith
Edward Lambe Parsons	Langdon Trufant Snipe
Charles Cook Paulding	Horace Sheldon Stokes
George Clarke Peck	Lewis Austin Storrs
Israel Hyman Peres	Joseph Parsons Tuttle
Gordon Brainerd Pike	John Underhill
Gifford Pinchot	Charles Abernethy Valentine
Robert Treat Platt	Howard Wills Vernon
Samuel Newman Pond	Horace Fletcher Walker
Harry Lathrop Reed	Frederic William Wallace
Charles G. Reynolds	Thomas Pinckney Waring
Oliver Huntington Richardson	Charles Milnor Washington
Henry Seymour Robinson	Lewis Sheldon Welch
William Hayden Rockwell	Hubert Wetmore Wells
James Gamble Rogers	Philip Patterson Wells
Henry Judson Sage	Edmund Burr White
Frederic Henry Sanford	James Thomas Whittlesey
William Davis Sawyer	Howard Hunter Williams
Ferdinand Schwill	Andrew Ludwig Winters
Edmund Daniel Scott	George Washington Woodruff

Horace Wylie

MASTERS OF ARTS

John Bennetto, B.A. }	Charles Henry Ludington, B.A. }
Yale University, 1887 }	Yale University, 1887 }
Colin Sherman Buell, B.A. }	John Norton Pomeroy, B.A. }
Yale University, 1885 }	Yale University, 1887 }
William Addison Houghton, B.A. }	Evans Woollen, B.A. }
Yale University, 1873 }	Yale University, 1886 }

BACHELORS OF PHILOSOPHY

Arthur Chambers Alexander	George Alfred Lund
William Belknap Allen	David Lyman
James Bradshaw Bailey	Boynton Wells McFarland
Louis Lawrence Barnum, LL.B. }	Kingsley Walton Martin
Yale University, 1886 }	Ferris Jacobs Meigs
William Bartlett Beckley	George Wellington Miles, Jr.
William Dennison Breed	John Raymond Mitchell
William Francis Breeze	Augustus René Moën
George Tyler Burroughs, Jr.	Edwin Morrison
Henry Studley Burroughs	William Brewster Morrison
Frank Arthur Busse	William Belknap Newberry
Perry Moore Caldwell	Roger Samuel Newell
Arthur Sanford Cheney	Frank Lee Owen
William Shinn Clawson	Kenyon Vickers Painter
William Hillard Conyngham	William Henry Pierce
Frank Marcus Cooper	Edwin Read
Louis Julius Curtis	Irwin Rew
Arthur Herbert Day	Henry Work Rianhard
Edward Hangary Day	Paul Skiff Robinson
Edwin Kirke Dillingham	Paul Sheaffer
Louis Coert DuBois	Arthur Bertram Skelding
Frederick Howard Ellsworth	Fred Palmer Solley, B.A. }
Harootune Enfiajian	Yale University, 1888 }
Edward Everest	Charles Emerson Stone
William Irving Ferrey	Danford Newton Barney Sturgis
Theron Rockwell Field	Lewis Hobart Sweetser
Lewis Brown Gawtry	Henry Hutchins Sykes
George Frank Goodale	Oren Edward Taft
Louis Montrose Haight	Abraham Louis Thalheimer
Henry Pierce Hall	Charles Newman Traver
Alfred Hand, B.A. }	Clarence Beecher Twitchell
Yale University, 1888 }	Harry Mighels Verrill
John Augustus Hartwell	Brownlee Robertson Ward, B.A. }
Leland Howard	Yale University, 1888 }
Arthur Grant Huntington	Robert Taylor Wheeler
Arthur Wiswell Jepson	Guthrie Minor Wilson
John Henry Klock, Jr.	Julian Vallette Wright
Frank Dodge Leffingwell, B.A. }	William Charles Wurtenberg
Yale University, 1887 }	

DOCTORS OF PHILOSOPHY

Charles Emerson Beecher, B.S. } University of Michigan, 1878 }	Rikizo Nakashima, B.A. } Western Reserve University, 1884, }
Charles Darling Buck, B.A. } Yale University, 1886 }	B.D. Yale University, 1887 }
Wilbur Lucius Cross, B.A. } Yale University, 1885 }	Frank Chamberlin Porter, B.A. } Beloit College, 1880, }
Asaph Hall, Jr., B.A. } Harvard University, 1882 }	B.D. Yale University, 1886 }
Edmund Otis Hovey, B.A. } Yale University, 1884 }	Frank Knight Sanders, B.A. } Ripon College, 1882, }
Fritz Jacobson, B.A. } Augustana College, 1885 }	M.A. Ripon College, 1883 }
William Ward McLane, B.A. } Blackburn University, 1871, }	George Stibitz, B.A. } Ursinus College, 1881 }
D.D. Blackburn University, 1882 }	M.A. Ursinus College, 1887 }
	Alfred Mundy Wilson, B.A. } Denison University, 1881 }

BACHELORS OF DIVINITY

Theodore Davenport Bacon	Manly Dayton Ormes, B.A. } Yale University, 1885 }
Eli Beers, B.A. } Yale University, 1886 }	Manasseh Garabed Papazian, B.A. } Central Turkey College, 1882 }
Clay Dent Chunn	Wallace Claire Payne, B.A. } Bethany College, 1886 }
Charles Franklin Clarke, B.A. } Yale University, 1886 }	Chas. Benj. Franklin Pease, B.A. } Williams College, 1886 }
Harlan Creelman	George Petry, B.A. } University of Pennsylvania, 1886 }
William Luke Cunningham, B.A. } Rutherford College, 1888, }	Arthur Stevens Phelps, B.A. } Yale University, 1886 }
PH.B. Ill. Wesleyan Univ., 1889 }	James Gibson Robertson, B.A. } Williams College, 1886 }
Olaus Dahl, B.A. } Luther College, 1885 }	Frank Robinson Shipman, B.A. } Yale University, 1885 }
George Pomeroy Eastman, B.A. } Amherst College, 1884 }	Henry Stauffer
William Griffiths	Glen Albert Taylor, B.A. } Williams College, 1885 }
Albert Wellman Hitchcock, B.A. } Amherst Coll., 1882, M.A. Amh. Coll. }	James Hayden Tufts, B.A. } Amherst College, 1884 }
Robert Murray Hogue, B.A. } University of Pennsylvania, 1886 }	Henry William Tuttle, B.A. } Williams College, 1886 }
Lewis Henry Keller	Howard Ridgway Vaughn, B.A. } Wesleyan University, 1886 }
William Henry Klose, B.A. } Roanoke College, 1886 }	Dean Augustus Walker, B.A. } Yale University, 1884 }
Luther Kendall Long, PH.B. } Adrian College, 1883 }	William Wiedenhoef, B.A. } Oberlin College, 1886 }
Winfield Scott Manship, B.A. } Wesleyan University, 1886 }	Charles Newton Zeublin, PH.B. } Northwestern University, 1887 }
Joseph Fairbanks Morse, B.A. } Amherst College, 1884 }	
John Frederic Nicholas, B.A. } Muhlenberg College, 1886 }	

DOCTORS OF MEDICINE

Thomas Stoddard Bronson, PH.B. } William Joseph O'Sullivan
Yale University, 1886 }

BACHELORS OF LAWS

Herbert Gorse Andrews	Frederick James Holmes
Willoughby Maynard Babcock, B.A. }	Frederick Buell Hungerford, B.A. }
Yale University, 1887	Yale University, 1886
Austin Ira Batchelder	Slikichi Iwasaki
Rodmond Vernon Beach, B.A. }	Frank Dyer Jackson, B.A. }
Yale University, 1887	Beloit College, 1884,
George Emerson Beers, B.A. }	M.A. Beloit College
Trinity College, 1886	Edwin Kerrison
Lewis Sherrill Bigelow, B.A. }	Daniel Andrews McWilliams
Yale University, 1887	William Reuben Mattison, B.A. }
Henry Brant	Amherst College, 1886
Andrew Julius Brown, Jr.	John Lewis Morehouse
James Joseph Buchanan	Toshitake Okubo
Edward Grant Buckland, B.A. }	Arthur Reed Pennell, B.A. }
Washburn College, 1887	Yale University, 1887
Alfred Coit, B.A. }	Thomas Henry Penney, B.A. }
Yale University 1887	Yale University, 1887
William Hutchinson Cowles, B.A. }	Arthur Perkins, B.A. }
Yale University, 1887	Yale University, 1887
John Wright Cox, LL.B. }	Richard Paul Rendler
Univ. of Ga., 1885	Virgil Eugene Rorer
Henry Maurice Danneel	Oliver Perry Scaife, Jr.
John Ambrose Doolittle	William Dick Shupe, B.S. }
Willard Robinson Douglass, B.A. }	Lebanon Valley College, 1887
Yale University, 1887	Carlos Hotchkiss Storrs, B.A. }
Harris Gilbert Eames	Wesleyan University, 1887
Antoine Joseph Ferrandini	Elmer Ellsworth Thomas, B.A. }
Andrew Frink Gates, B.A. }	National Normal University
Yale University, 1887	William Trumbull, B.A. }
James Henry Hayden, PH.B. }	Yale University, 1883
Yale University, 1887	James Albert Wilson

MASTERS OF LAWS

Daniel Everitt Leary, LL.B. }	Clement Darling Rinehart, LL.B. }
Yale University, 1888	Yale University, 1888
Kojiro Matsugata, LL.B. }	Soichi Tsuchiya, LL.B. }
Yale University, 1888	Yale University, 1888
Frank Dunlap Pavey, B.A. }	
Yale Univ., 1884, LL.B. Yale, 1886	

HONORARY DEGREES:

DOCTORS OF DIVINITY

Rev. John Kinne Hyde DeForest, B.A. 1868

Rev. Andrew Martin Fairbairn, Principal of Mansfield College, Oxford,
England

Rev. Charles Ray Palmer, B.A. 1855

Rev. Gardiner Spring Plumley, B.A. 1850

Rev. Paul Peter Waldenström, Ph.D., Stockholm, Sweden

DOCTORS OF LAWS

Henry Laurens Dawes, B.A. 1839, Senator of the United States

Francis Miles Finch, B.A. 1849, Judge of Court of Appeals of the State
of New York

Daniel Coit Gilman, B.A. 1852, President of John Hopkins University

Horatio C. Wood, M.D., Professor in the University of Pennsylvania

MASTERS OF ARTS

Morgan Gardiner Bulkeley, Governor of the State of Connecticut

Albert Stanburrough Cook, B.S. Rutgers College 1872, Ph.D. Univer-
sity of Jena 1882, Professor of English in Yale College

Augustus Hall Fenn, Judge of the Superior Court of the State of Con-
necticut

Willard Preble Hall, Judge of the Supreme Court of the State of Mis-
souri

Henry Phelps Johnston, B.A. 1862

George Matthews Sharp, LL.B. 1875

John Sloane

William Douglas Sloane

Rev. Edward Alfred Smith, B.A. 1856

Timothy Lester Woodruff

APPOINTMENTS FOR COMMENCEMENT,

YALE COLLEGE, JUNE 26, 1889

ORATIONS

WILLIAM ADOLPHE MCQUAID

HORACE FLETCHER WALKER

LESTER BRADNER, Jr.

{ JOSEPH RALPH ENSIGN

{ OLIVER HUNTINGTON RICHARDSON

FERDINAND SCHWILL

EDMUND DANIEL SCOTT

[The names in the following groups are in alphabetical order.]

John Wallace Banks
George Coghill
Charles Foster Kent
William Herbert Page
Harry Lathrop Reed

Herbert Augustine Smith
Andrew Ludwig Winters
George Washington Woodruff
Horace Wylie

William Pope Aiken
Ernest Smith Bishop
Arthur May Hyde
George Lyman Lamphier
Charles William Lefler

Edward Lambe Parsons
Samuel Newman Pond
Frederic Henry Sanford
Frederick Andrew Scott
Howard Hunter Williams

DISSERTATIONS

William Whitney Ames
Thomas Walter Buchanan
Safford Arnold Crummey
John Havemeyer Daniels
Thomas Elliott Donnelley
John Cornelius Griggs

Baruch Israeli
Elmer Francis Letcher
Augustus Henry Mosle
Charles Sanford Skilton
Charles Milnor Washington
Lewis Sheldon Welch

DISPUTES

Burr Reeve Abbe, Jr.
Philip Embury Browning
Thomas Mitchel Cullinan
Frederick Wesley Ellis
Edward Barrett Hinckley
George Clarke Peck

Gifford Pinchot
Robert Treat Platt
Charles Hitchcock Sherrill
Lewis Austin Storrs
Philip Patterson Wells

Freeman Donald Baerman
Dwight Walter Bissell
Charles Twing Brooks
William Herbert Corbin
W. Chester DeForest Dickinson
Albert Myrick Freeman
Robert Lee Luce
William Ross Matson
John Ball Osborne

Charles Cook Paulding
Charles G. Reynolds
Henry Seymour Robinson
William Hayden Rockwell
Langdon Trufant Snipe
Joseph Parsonß Tuttle
Howard Wills Vernon
Hubert Wetmore Wells

COLLOQUIES

William Lucius Armstrong
Porter Beach Godard
Thomas Hanlon, Jr.
Benjamin Willard Jacobs

Joseph Sprigg McMahon
Thomas Gaskell Shearman
John Underhill

Henry Cornelius Atkins
Horace Bennet Bartholomew
Claude Lamot Forbes
Edward James Gavegan
Charles Otis Gill

Rob't Watkinson Huntington, Jr.
James Henry Keefe
Horace Sheldon Stokes
Thomas Pinckney Waring
James Thomas Whittlesey

SPECIAL HONORS

TWO-YEAR HONORS

In Political Science, History, Law:
Robert Lee Luce

William Adolphe McQuaid
Philip Patterson Wells

ONE-YEAR HONORS

In Philosophy:

John Havemeyer Daniels
Arthur Mitchell Little

In Political Science, History, Law:

John Wallace Banks
Arthur May Hyde
Baruch Israeli
Harry Lathrop Reed
Edmund Burr White
Howard Hunter Williams

In Ancient Languages:

William Herbert Page

In English:

Frederick Wesley Ellis
Charles Cook Paulding
Edmund Daniel Scott
Herbert Augustine Smith

In Modern Languages:

Baruch Israeli
Horace Fletcher Walker

In Natural and Physical Science:

Philip Embury Browning
Samuel Newman Pond
James Thomas Whittlesey

APPOINTMENTS FOR JUNIOR EXHIBITION,

YALE COLLEGE, APRIL 11, 1889

PHILOSOPHICAL ORATIONS

GEORGE L. AMERMAN
FREDERICK BEDELL
WALTER ALDEN DECAMP
LEWIS SCOFIELD HASLAM
CHARLES FRANCIS SMALL

ORATIONS

Roger Sherman Baldwin
Frank Terry Brooks
John Crosby
Walton Dennis
Henry Thatcher Fowler
George William Gedney
Charles Humphrey Hamill
Elliott Pactor Joslin

Yale Kneeland
William Appleton McConnel
Frank Sherman Meara
Sidney Nelson Morse
Harry Loomis Munger
Henry Opdyke
Nathan Todd Porter, Jr.

William Hale Beckford
Charles Bemis Bliss
Amasa Day Chaffee
John White Corwith
John Day Jackson
Donald McCormick

Thomas Edward McEvoy
Solomon Cristy Mead
Herbert Parsons
Stuart Henry Rowe
Edward Minot Shelton
John Howard Sherwood

DISSERTATIONS

Harry Jenkins Bardwell	John Francis McGuire
Albert Bingley Bennett	George Nathan Newman
Edward Brooks, Jr.	David Scharps
Howard Dennis Collins	Howard Van Doren Shaw
Wolcott Webster Ellsworth	Wallace Delafield Simmons
Charles Fitch Lester	Henry Sterne Woodward
William Chittenden Lusk	

DISPUTES

Herbert Morton Bishop	Bert Hanson
Charles Cranston Bovey	May Humphreys
William Thurston Brown	George Arthur Hurd
George Henry Capen	Henry Smith Mathewson
Howard Elmer Crall	Charles Eliphalet Robbins
Charles Dussler	Henry Leo Scheuerman
Arthur Espy	James Willcox Thompson
William Sherman Greene	

Frank Eli Bradley	Ralph Augustine McDonnell
Bert Francis Case	Knowlton Mixer
Albert Cushing Crehore	William Greenwood Morris
Arthur Pomeroy Day	Richard Truman Percy
Clark Terry Durant	Henry Manning Sage
George Day Holmes	Albert Arthur Tilney
Addison Hills Hough	Henry Veeder
Walter Irenæus Lowe	Lewis Bartholomew Woodruff

COLLOQUIES

Jacob Jay Abt	Charles Poole Kellogg
Maximilian Baird	Thomas Jay Lloyd
Arthur Willis Colton	Robert Hale Merriam
John Dorrance Farnham	Robert Eston Phye
Reginald Fairfax Harrison	Harry Elbridge Pratt
Charles Houston Haskell	George Wadsworth Raynes
Roland Holt	

Edgar Ames	George Frederick Peter
James Robertson Barbour	Stowe Phelps
Charles Wright Boltwood	Frederick William Robinson
John Williams Brady	William Henry Smith
Charles Albert Ebersole	William Howard Smith
George Hills Gilman	Percy Hamilton Stewart
Rodney Lawrence Glisan	Albert Jason Willson
Elihu Marvin Griswold	

UNDERGRADUATE SCHOLARS OF THE HOUSE, YALE
COLLEGE, FOR THE YEAR 1889-90:

WOOLSEY Scholar, Class of 1890—CHARLES FRANCIS SMALL.
BRISTED Scholar, Class of 1891—CURTIS CLARK BUSHNELL.
WOOLSEY Scholar, Class of 1891—JOHN JOUGHIN COX.
WOOLSEY Scholar, Class of 1892—JAMES W. D. INGERSOLL.
HURLBUT Scholar, Class of 1892—ALFRED BARNES PALMER.
THIRD Freshman Scholar, Class of 1892—BERNARD MELZAR ALLEN.

UNIVERSITY PRIZES, AWARDED IN JUNE, 1889:

JOHN A. PORTER Prize—Edward G. Buckland, B.A., of the Senior Class in the Law School; with special commendation of Frederick H. Means, B.A., of the Junior Class in the Divinity School.

Committee of Award: Rev. Theodore T. Munger, D.D., of New Haven; Buchanan Winthrop, Esq., of New York City; Professor George B. Stevens, D.D., of New Haven.

COBDEN CLUB Medal, Class of 1889—Philip P. Wells, of the Academical Department, with honorable mention of Robert L. Luce, of the same Department.

PRIZES AWARDED IN YALE COLLEGE, 1888-89:

DEFOREST Prize Medal, Class of 1889—Gifford Pinchot.

TOWNSEND Premiums, Class of 1889—William H. Page, Ferdinand Schwill, Charles S. Skilton, Herbert A. Smith, Lewis A. Storrs.

DEFOREST MATHEMATICAL PRIZES:—*Senior Mathematical Prizes*, 1st Prize, not awarded; 2d Prize, Edward B. Hinckley.

Class of 1890—1st Prize, Albert C. Crehore; 2d Prize, Charles B. Bliss.

Class of 1891—2d Prize, Lyle A. Dickey and Hippolyte W. Gruener.

Class of 1892—1st Prizes, Henry G. Crocker and George H. Girty; 2d Prizes, Bernard M. Allen and George R. Montgomery.

LUCIUS F. ROBINSON Latin Prizes, for Classes of 1889 and 1890—1st Prize, Edmund D. Scott, Class of 1889; 2d Prize, Wm. H. Page, Class of 1889; 3d Prize, George L. Amerman, Class of 1890. For Class of 1891, 1st Prize, Nathan Glicksman; 2d Prize, divided between Wm. T. Bartley and Curtis C. Bushnell; 3d Prize, Herbert K. Smith.

SCOTT Prize in German, Class of 1889—Ferdinand Schwill.

SCOTT Prize in French, Class of 1890—Walter A. DeCamp.

WINTHROP Prizes, Class of 1890—1st Prize, Charles E. Robbins; 2d Prize, divided between Stuart H. Rowe and David Scharps.

HENRY JAMES TEN EYCK Prizes, Class of 1890—1st Prize, John Crosby; 2d Prizes, Roger S. Baldwin, Walter A. DeCamp, Wolcott W. Ellsworth, Lewis S. Haslam, George A. Hurd, John D. Jackson, Yale Kneeland.

COMPOSITION Prizes, Class of 1891—1st Prizes, John J. Cox, Howard T. Kingsbury, Ray B. Smith; 2d Prizes, Grosvenor Atterbury, James W. Broatch, Harry H. Tweedy; 3d Prizes, Francis T. Brown, Hampton P. Howell, Robert G. McClung, Edward A. Thurber.

DECLAMATION Prizes, Class of 1891—1st Prize, Francis T. Brown; 2d Prize, Frank Crawford; 3d Prize, Allan G. Robinson.

BERKELEY PREMIUMS, Class of 1892—1st Grade, Bernard M. Allen, Henry G. Crocker, Henry B. Hinckley, James W. D. Ingersoll, Alfred B. Palmer; 2d Grade, Fred. C. G. Bronson, William L. Kitchel, Paul Klimpke, Arthur W. Shaw, James E. Wheeler, Albert L. Whittaker.

HUGH CHAMBERLAIN Greek Prize, Class of 1893—Winthrop E. Dwight, of New Haven, Connecticut, prepared under private instruction; with honorable mention of William Begg, from the Hartford, Connecticut, Public High School; William L. Couch, from the New Haven, Connecticut, High School; and William J. Lamson, from the Montclair, New Jersey, High School.

**PRIZES AWARDED IN THE SHEFFIELD SCIENTIFIC
SCHOOL, JUNE, 1889:**

Class of 1889:

THE BELKNAP NATURAL HISTORY PRIZE—Charles E. Stone, with honorable mention of John A. Hartwell, William B. Newberry, and Guthrie M. Wilson.

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FOR EXCELLENCE IN MECHANICAL ENGINEERING—the Prize divided between Frank A. Busse and William B. Morrison.

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FOR EXCELLENCE IN ALL THE MATHEMATICS OF THE JUNIOR YEAR—Frank R. Rich.

FOR EXCELLENCE IN GERMAN—Frank R. Rich, with honorable mention of Alexander W. Evans, both having shown exceptional excellence.

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JEWELL PRIZE, for the best Examination at graduation—George E. Beers, B.A., Trinity College.

O. S. SEYMOUR PRIZE, to that member of the graduating class who has made the greatest improvement in scholarship during both years of his course—Toshitake Okubo.

BETTS PRIZE, to the member of the Junior Class receiving the highest marks at his annual examination—Orland S. Isbell, B.A., Yale University.

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